



Agile Learning Environments amid Disruption

Evaluating Academic Innovations
in Higher Education during COVID-19

Edited by Md Golam Jamil · Dawn A. Morley

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*For Md Golam Mostafa, Md Imamul Haque,
and Julian David Morley*

Foreword 1

Higher education faced unprecedented challenges and opportunities during the COVID-19 pandemic. Many lecturers were forced by circumstances to adapt to new ways of teaching, particularly those who were new to online, hybrid and blended pedagogies. This edited collection is a welcome reflection on research undertaken at the coal-face of technology-mediated teaching practice across a range of international institutions of higher education. Its core aim is to systematically evaluate academic innovations in teaching and learning.

So, what have we learnt? My feeling is that the most important lesson is we have been able to keep the centrality of the student experience at the core of our pedagogical practice. This has not been easy and has required highly reflective (and perhaps self-critical) appraisals by lecturers to continuously drive forward the development of their practice. The role of students should not be underestimated here either. Without their support, inquisitiveness and collaboration, successful new pedagogies would not be possible. In this regard, a real asset of this collection is its global perspective, reflecting a wide range of practices and challenges within and across higher education institutions worldwide.

One key lesson for the university has been learning how to develop systematic approaches to online and hybrid learning, while allowing for bottom-up innovation. In some ways, this has been challenging, particularly for the hybrid context. Before the pandemic, a great deal of research

had been done on pedagogical practice in the physical teaching space. Much of this was practitioner-led and by early adopters, but it was also a central part of many lecturer training programmes. In the same vein, the research base for approaches to online learning is vast. It was clear that these bodies of research would be fundamental to developing teaching practice during the pandemic. However, as much less was known about hybrid learning pedagogies, this prior knowledge could only take us so far. In this sense, practitioner-informed research on hybrid teaching and learning was critical not only for informing, in a realist sense, what worked, for whom and in what context but also for highlighting the clear systematic weaknesses that remained.

Teaching and learning during the pandemic made clear the critical importance of pedagogic design in order to address the challenges of hybrid learning. Simply put, a strong design focus that draws, in a multi-disciplinary manner, on research from learning space design, pedagogical practice and student engagement is required. This is especially true for remote students: lecturers must have designed their sessions to cater to their needs in real time, and ideally to be as interactive as possible, including designing for collaborations between in-person and remote students. An absolutely key issue to keep in mind is that any new practice must be able to support students with diverse learning needs.

The challenge of teaching and learning during the pandemic was clear. We are now continually building our knowledge to provide high-quality education in hybrid settings. The academic innovation detailed in this book is a very positive step in this direction.

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Niall Winters

Foreword 2

I am delighted to provide a foreword for this important book, which offers a timely, principled evaluation of educational innovations that those working in higher education have developed in response to the global COVID-19 pandemic.

The global pandemic has tragically resulted in many deaths and widespread human suffering. People's lives across the planet have been hugely disrupted, and it is not clear that life will ever return to what was considered normal prior to March 2020. The impact on the education offered by higher education institutions has been profound. Globally students have been studying in much more diverse settings than before, with a huge increase in the number of students predominately studying online (Farnell et al. 2021). Inequalities between students have increased with poorer students having less access to spaces in which to study and the technology they now need to access their education (Farnell et al. 2021). For students who are graduating, there have been falling rates of graduate employment (International Labour Organization 2020, 2021). For higher education institutions there has been increased pressure on the public funding they receive as government spending has increased to respond to multiple societal challenges related to the pandemic.

In the face of these challenges, many higher education programmes have been forced to rapidly and radically rethink the educational environment that they offer to students. If we understand this education in

terms of bringing particular students in relation to particular bodies of knowledge in particular settings (Ashwin 2020), it is clear that both the students and the settings in which they study have been hugely disrupted. This volume provides an insight into the institutional, curricular, pedagogic, assessment and pastoral innovations that have occurred in a broad range of national, cross-national and disciplinary and professional settings. It provides a very important insight into which of these innovations have worked well, so that we do not lose the lessons learned from these experiences, as well as an evaluation of the sustainability of these academic innovations.

A longer term question is how the particular bodies of knowledge that students engage with will change as a result of the global pandemic. This requires those who work in higher education to reflect on evidence about how the world they are preparing students for has changed and then to consider the re-design of their curricula based on these reflections. Whilst this question is beyond the scope of this book, the record of innovation that this volume offers will provide an invaluable tool for those who wish to consider their options in redesigning their curricula in the light of the changed world that students will graduate into in the future.

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References

- Ashwin, P. (2020). *Transforming University Education: A manifesto*. Bloomsbury.
- Farnell, T., Skledar Matijević, A., & Šćukanec Schmidt, N. (2021). *The impact of COVID-19 on higher education: A review of emerging evidence*. NESET report. Publications Office of the European Union.
- International Labour Organization. (2020). *Youth & COVID-19: Impacts on jobs, education, rights and mental well-being*. International Labour Organization.
- International Labour Organization. (2021, June). *An update on the youth labour market impact of the COVID-19 crisis*. Statistical Brief. International Labour Organization.

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1

Introduction: Academic Innovations in Disruptive Learning Environments and the Power of Research-informed Case Studies

Md Golam Jamil

Background

In 2020–2022, the COVID-19 pandemic triggered an unprecedented response from global higher education institutions to rethink their programmes of study so students could continue learning and be supported at a distance. Response and policy were predominantly generated at the local level with guidance from notable wider organisations (McAleavy & Gorgen, 2020). Early publications reported many individual, programme-specific, and institution-wide efforts (Baloran, 2020; Moorhouse, 2020; Murphy, 2020), and in a few cases the broad views at national and regional levels (Crawford et al., 2020; Kapasia et al., 2020). The findings signal a paradigm shift in the overall higher education practice as well as perceptions of the stakeholders on non-traditional approaches to teaching and learning.

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Due to the pandemic, many countries maintained 'social distancing' measures, and in line with that, universities replaced traditional face-to-face instruction with remote teaching and learning, mainly using virtual learning platforms. After years of slow response to technology-enhanced learning in higher education (Garrett, 2019; Usher, 2020), this thorough shift within a short span of time created challenges in enabling agile and authentic learning environments. The challenges were at both university/system and pedagogy/learning levels (Shrestha et al., 2022); whereas students' accessibility, motivation, and mental health issues emerged as critical areas to address (Ali, 2020; Toquero, 2020). However, due to resource constraints and lack of tested policies, vulnerable and low socioeconomic populations across the world were most impacted during this time (Crawford & Cifuentes-Faura, 2022). The challenges associated with online and distance learning were multi-layered, thus a holistic approach was necessary to connect remote learning processes and relevant change management procedures (Mishra et al., 2020). Additionally, an efficient contingency plan for dealing with unanticipated incidents appeared as a vital requirement (Bao, 2020).

In the rapid transition to remote learning in higher education, faculty members and technological infrastructure received a stronger focus compared to considerations for student needs and preferences (Neuwirth et al., 2021). The most probable outcome of this policy difference was inequality among universities, particularly in areas of academic quality and student engagement (Marinoni et al., 2020; Pownall et al., 2022). However, it is likely that many innovative methods facilitated successful teaching, well-being, and education management which consequently enhanced student learning and satisfaction. Yet, the proper documentation of these cases and their impacts was not easy for the practitioners as they faced difficulties, such as time constraints, inadequate exposure of scholarly writing, and lack of suitable platforms to reach internal and external audiences (Barger et al., 2021). This edited collection addresses this gap and creates a space for the practitioners who implemented academic innovations in their professional fields and were able to observe the impacts closely. This personal attachment and work-based learning are powerful evidence for the authors and readers of this book.

Academic Innovations: A Brief Overview

Historically, higher education functions through many deeply rooted academic beliefs and conventions (Gibbs, 2014; Shulman, 2005; Tagg, 2019). Therefore, sudden disruptions and unexpected adjustments in traditional educational practices can trigger complexities leading to poor teaching performance and learning outcomes. However, any changed circumstances can also create opportunities for the stakeholders to experiment with creative and unconventional teaching and learning activities which may have capabilities to sustain within traditional instructional models as well.

The chapters (or the case studies) in this edited collection showcase various innovative approaches to teaching, learning, and academic support at universities across the world. They discuss how the innovations responded to the changed academic cultures, educational environments, and learner dynamics during the COVID-19 pandemic. The findings elucidate different roles of academic innovation and their connections within higher education settings, which have been inconsistent historically (Whitworth, 2012). The discussion points individually and collectively provide with valuable insights for higher education policy makers, leaders, and practitioners on academic innovation goals, procedures, and their possible implications. The following brief conceptual discussion about academic innovation may help understand the input of the chapters more fully.

Academic Innovations in Higher Education Milieu

Until the late twentieth century, the term innovation generally referred to as a conceptual framework emphasising any socioeconomic changes, for example, 'social innovation' in the post-revolution France, or 'industrial innovation' as discussed by Christopher Freeman (Freeman, 2013). Academic innovation in higher education is comparatively a new concept integrated with educational policies, praxis, and change aiming to enable successful educational responses and interventions within ever-changing learning environments (Blumenstyk & Gardner, 2019). The commonly

used terms of academic innovation in higher education are curricular innovation (Dobbins, 2009), technological innovation (Whitworth, 2012), and pedagogical innovation (Walder, 2017).

The discourse around academic innovation contains a focus on many novel plans and actions attached to adaptive and multimodal learning, academic development, learning technology, research methods, and education management and leadership. Despite the greater use of the term in the higher education literature, academic innovations lack unambiguous definitions and clarity in its academic value and links with educational settings (Barger et al., 2021). Furthermore, there is still a lack of agreement on what factors can determine the success of an academic innovation (Tierney & Lanford, 2016). It is plausible that the definitions of academic innovation are more complex within the learning environments that acknowledge inclusion, equity, and social justice as important considerations.

Towards a Simple Definition of Academic Innovations

From conceptual viewpoints, academic innovations can be seen in three broad forms: as a product or instrument, as a process, and as a fresh approach to thinking. Creativity and novel actions are also important concepts associated with academic innovations (Serdyukov, 2017; Tierney & Lanford, 2016). The value of these perspectives inspires to take the following baseline definition of academic innovations in this book. This contains elements of ethos, actions, and implications of academic innovations in the global higher education sector.

Academic innovations are new educational ideas and unconventional actions within a developing learning environment. They can change or replace traditional approaches to knowledge creation and engage varied skills and expertise in the intervention process. The impacts of academic innovations may be benefiting or disadvantageous which can be gauged through educationally principled research and standards.

Academic innovations are innately context-bound (Barger, 2016). Learning contexts contain multiple layers and many actors, such as stakeholders, learning culture and environments, organisational strategies and priorities, curricular approaches, and availability of educational resources (Jamil, 2018). It is important to acknowledge that an innovation culture or the stakeholders' positive attitudes towards innovations may not be enough to successfully generate and implement academic innovations, rather it is essential to ensure individual and collective efforts as well as commonly accepted indicators of success (Jakovljevic, 2018).

Educationally Principled Appraisals and the Power of Research-informed Case Studies

Academic programmes in higher education have to be evaluated regularly to determine their relevance, efficiency, and sustainability. A systematic evaluation can help capture qualities of teaching, learning, and academic support provisions, and can suggest measures to embark on realistic changes (Carlucci et al., 2019; Jessop & Tomas, 2017; Van Melle et al., 2019). The need of evaluating innovative or non-traditional academic schemes is greater, particularly for understanding the feasibility of their unconventional teaching-learning procedures and extraordinary educational environments. It is also important to document and report them in a reliable way so that the knowledge of educational processes as well as the struggles and successes of the associated people can guide future educational philosophies and actions. However, it is not always easy to engender accessible and reliable narration of academic programmes, particularly when the academic environments and educational activities take unfamiliar dimensions through educational innovations. Traditionally, the success and failure of any academic innovations are perceived only through evaluating the stakeholders' participation and completion of the scheme. The key limitation is that the consideration and utilisation of any common success factors for various academic innovations are not easy (Findlow, 2008). Therefore, it is logical to evaluate individual

academic innovations as separate cases which might allow contextualising the scheme and communicate the implications more reliably. In this edited collection, the authors follow this approach and present case studies supported by research-informed and educationally principled appraisals.

Generally, a case study explores a single object, individual, action, or phenomenon within its 'natural context, bounded by space and time', and the findings are presented in a 'richly descriptive' format (Hancock et al., 2021, pp. 15–16). It involves an intensive study and discovers issues deeply and thoroughly. The findings often stimulate new research involving fresh questions and the need for an enhanced understanding of the topic. The approach has already been proven suitable in education disciplines, particularly in areas of academic innovations and programme evaluation (Reis, 2009).

The case studies in this book are developed around academic innovations implemented in higher education during the COVID-19 pandemic. Most of them include a small-scale research project for evaluating the innovation; however, the authors' personal experience and observation supply rich narratives and help readers realise the context and actions in an authentic manner. Whereas observations and reflections are celebrated in this book, the authors pay careful attention to research rigour and thus use systematic methods for data collection, logical analysis in presenting the findings, and, finally, linking the lessons learned with their perceived implications in the future. This critical awareness is essential in social science research, particularly to ensure the credibility of the findings and address risks of researcher bias which often develops through high-level personal attachment and subjective reflections.

Educationally principled appraisals have capabilities to capture the benefits and problems of academic innovations. The literature on emergency learning in higher education during disruptions with reference to the COVID-19 pandemic developed significantly during 2020 and 2022 while this book was being prepared. On the one hand, research findings in this area were generally taking place in academic journals, but they often lacked contextual specifics because of the limitations set by traditional 'journal article' formats. In education and social science fields, contextual details are an important source for understanding and relating to

complex issues. This edited collection addresses this requirement through forty-six context-rich and research-informed case studies which supply details of respective learning contexts, particularly the actions and actors involved in the considered educational processes. They also involve research elements to ensure credibility of the discussion and learning points. The authors not only present their own responses to learning during the pandemic but also the longitudinal effects of these changes. Additionally, the case studies are written in plain and non-technical language which is suitable for wide-ranging readerships including those who do not have rigorous theoretical knowledge or research backgrounds.

The reason for considering research-informed case study approach for this book was the lack of systematic evaluation of educational policies and innovative actions in higher education literature linked to a pandemic situation. The authors conduct a rich documentation of educational changes and innovations in ‘socially-distanced’ learning environments. For a focused exploration, they present just one specific aspect of innovation in each case study. However, in several case studies, multiple subjects and incidents emerge demonstrating comparative phenomena. Yet, each case study narrates a complete story and elucidates the context, the people, and the activities for easy understanding of general readers. The good practice and guiding principles identified in the case studies are expected to have resonance beyond the unprecedented time and circumstances during COVID-19.

The Trajectory of this Edited Volume

Apart from the Introduction and Conclusion, the forty-six chapters in this book report forty-six enlightening case studies enriched with systematic appraisals of academic innovations. The case studies are a useful documentation of educational changes and innovations in disruptive and ‘socially-distanced’ learning environments caused by the COVID-19 pandemic. The good practice, learning points, and guiding principles have implications beyond this unprecedented time and circumstances.

The chapters of this book are grouped in the following five theme-based sections.

Part I: Taking an Institutional Perspective to Learning amid Disruption

This section contains twelve chapters or case studies capturing the whole institution's efforts in addressing academic disruptions during the COVID-19 pandemic. Morley and Holley review the publications stored in the COVID-19 Higher Education Literature Database (CHELD) and report some fresh findings on teaching and learning in academic disruptions (Chap. 2). Heard-Lauréote and Buckley share the journey of a university that goes beyond traditional higher education boundaries while implementing emergency online transition (Chap. 3). Krygier, Knowles, Gill, Kwong, Irwin, Towey, and Pike discuss the challenges a university in China faced in delivering remote learning (Chap. 4). In addition to the perspectives of teaching and learning, Allman addresses mental health issues for students and suggests strategies through staff development and the use of existing platforms (Chap. 5). With reference to an example of remote instruction in Indian higher education, Dharmaraj-Savicks shows struggles of low-resource universities in implementing governmental policies and decisions (Chap. 6). Dart and Woodlands highlight the approaches and implications of delivering online professional development workshops using technology (Chap. 7). Prapinwong and Dosaka report their learning from a virtual intercultural exchange project (Chap. 8). Griffiths, Dickinson, and Kellock describe an institutional change to online learning at the faculty level (Chap. 9). Pike and Rainford share some key considerations for ensuring contextually effective change (Chap. 10). Waterhousea, Dennis, and Alvarez explore strategies for academic leaders to enhance social presence in remote learning (Chap. 11). Stewart, Polkinghorne, and Devis-Rozental report programme management experiences in coordinating a centralised online programme for developing researchers (Chap. 12). Mahgoub explores approaches to ensure the quality of intended learning outcomes through active engagement of academic leaders (Chap. 13).

Part II: Redesigning Whole Programmes to Meet Challenges of Remote Learning

This section has eleven chapters, and the case studies capture experiences of academic programme-level interventions. Piggot and Winchester-Seeto report some unique features of an online work-integrated learning programme (Chap. 14). Alshehri explores educators' pedagogical orientations for online instruction in science education (Chap. 15). Ambyo and Rogers show how revamping communication and teaching strategies can help enhance student experience in Journalism (Chap. 16). Tang and Liu highlight their experience of converting an English writing programme to online delivery (Chap. 17). Gribble and Wardrop discuss tactics to exercise student 'voice' in the online classroom (Chap. 18). Berragan, Hanlon, McCrum, Watkins, and Williams investigate some final-year student nurses' perceptions of working in a paid placement (Chap. 19). Avery and Wason discuss their use of Networked Learning, Community of Inquiry model, and conversational framework in creating online Business courses (Chap. 20). Apart from reporting innovative approaches to academic programmes, the case studies also include discussions on professional training and development programmes. King, Silva, and White describe a programme on improving the professional capacity of Graduate Teaching Assistants for helping undergraduate students (Chap. 21). Woodlands and Laundon share approaches to supporting precarious academic staff for online teaching (Chap. 22). Clapp reports the implementation of an online medical course for staff development for online teaching (Chap. 23). Cuthbert and Stinson describe the strategies they applied for engaging and supporting staff in a professional recognition and fellowship scheme (Chap. 24).

Part III: Focusing Pedagogic Design in Remote and Blended Curricula

This section is pedagogical approach and tool specific, and it contains eleven chapters. Chika-James, Oyet, and Leung discuss the use of infographics as a learning tool (Chap. 25). Sedghi shows the procedure and

impacts of using pre-lab activities in the blended delivery of Chemistry education (Chap. 26). Becker highlights the use of YouTube screencasts to support learning in English literature (Chap. 27). Fatania, Andrews, and Clark study learning logs and their impacts in facilitating reflexivity and deep learning in people management course (Chap. 28). East, Warriner-Wood, and Wood evaluate roles of collaborative online learning in developing reading skills in History (Chap. 29). Bhuiyan and Sohal analyse the perceived effectiveness of cloud simulation for remote maritime training (Chap. 30). Joseph-Richard and Cadden explore the powers of various ‘research-oriented teaching’ strategies within remote learning environments (Chap. 31). Kjaersgaard investigates pedagogical viability of using stop motion animation in Landscape Architecture (Chap. 32). Stainer, Tait, Bóckle, and Watson explore the use of virtual placement in Healthcare education (Chap. 33). Bailey-Ross, Andrews, Hasan, and Haestier report their investigation into the feasibility of Virtual Design Studio for Architecture education (Chap. 34). Cash evaluates the roles of community, content, and facilitator in the pedagogy of an online Human Resources module (Chap. 35).

Part IV: Restructuring Assessment and Feedback for Online Pedagogies

This section contains four chapters with a focus on assessments in remote learning environments. Saluja and Keen-Dyer share a unique collaboration approach based on a staff buddy system (Chap. 36). Gyanwali and Gyanwali analyse online assessment policies and practice at a low-resource university in Nepal (Chap. 37). Spowart, Price, and Perwaiz evaluate the delivery and assessment of micro-teaching sessions for Healthcare professionals (Chap. 38). Filer and Davies discuss the potential of virtual reality case studies for assessment preparation and practice (Chap. 39).

Part V: Supporting Student Learning and Wellness in Lockdown

This section has eight chapters, and the case studies evaluate some student support initiatives at universities during the pandemic. Rauseo, Rathnayake, and Marinciu explore factors and support provisions linked to students' decision-making (Chap. 40). Mealey describes an institutional response to personal tutoring (Chap. 41). Islam and Islam report their findings from an eMentoring scheme targeted to ensuring student retention (Chap. 42). Teh and Chew discuss a holistic approach to teaching and academic support for final-year Business students (Chap. 43). McCann and Bagheri evaluate the impact of a skills immersion programme with undergraduate students (Chap. 44). Joseph-Richard and Almpanis present findings of their investigation into the remote student support by faculty members (Chap. 45). Dobele, Stavros, and Boymal advocate in favour of staff's own learning which they consider helpful in decentralising decision-making at universities (Chap. 46); and Knapton and Irving-Bell explore lived experiences of some Institutional Fellows to understand their contributions to overall learning and teaching priorities during academic disruptions (Chap. 47).

Summary

In the five sections of this edited volume, the authors report real-world learning (Morley & Jamil, 2021) examples of academic innovation captured and presented through research-informed case studies. They shed light on distinct academic strategies and activities through 'whole university' approaches, and from perspectives of individual academic departments and subject areas, such as Medical Sciences, Business, Journalism, Chemistry, Language, Economics, History, and Architecture. The authors and educational evidence gathered from countries, such as Australia, Bangladesh, Canada, China, India, Malaysia, Nepal, Saudi Arabia, Thailand, and UK show potential benefits of educationally principled appraisals in capturing empowering and deterring elements of academic

innovations implemented during the COVID-19 pandemic. This enables the contextual richness of the book.

The readers of this edited collection are expected to receive cross-cultural viewpoints and fresh academic perspectives which they may find transferable to similar higher education settings. A systematic evaluation of educational policies and innovative actions during a pandemic situation is a less-explored area in higher education literature. This book hopefully fills this gap and provides research-informed guidelines on how university leaders, academics, researchers, and professional services staff can prepare and act effectively in a disrupted educational environment. The examples of best practice and practical recommendations have strengths to be transferred to conventional face-to-face learning culture.

References

- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3), 16–25.
- Baloran, E. T. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss and Trauma*, 25(8), 635–642. <https://doi.org/10.1080/15325024.2020.1769300>
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113–115.
- Barger, A. P. (2016). *Teachers' perceptions of contextual influences on instructional decision-making regarding the use of educational technology in secondary social studies* (Publication No. 10161496). [Doctoral dissertation, The College of William and Mary]. ProQuest Dissertations & Theses Global.
- Barger, A. P., Leffel, K. G., & Lott, M. (2021). Plotting academic innovation: A content analysis of twenty institutional websites. *Innovative Higher Education*, 1–17. <https://doi.org/10.1007/s10755-021-09568-4>
- Blumenstyk, G., & Gardner, L. (2019). *Innovation imperative: The buzz, the barriers, and what real change looks like*. The Chronicle of Higher Education.
- Carlucci, D., Renna, P., Izzo, C., & Schiuma, G. (2019). Assessing teaching performance in higher education: A framework for continuous improve-

- ment. *Management Decision*, 57(2), 461–479. <https://doi.org/10.1108/MD-04-2018-0488>
- Crawford, J., & Cifuentes-Faura, J. (2022). Sustainability in higher education during the COVID-19 pandemic: A systematic review. *Sustainability*, 14(3), 1879, 1–11.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 1–20. <https://doi.org/10.37074/jalt.2020.3.1.7>
- Dobbins, K. (2009). Feeding innovation with Learning Lunches: Contextualising academic innovation in higher education. *Journal of Further and Higher Education*, 33(4), 411–422. <https://doi.org/10.1080/03098770903272495>
- Findlow, S. (2008). Accountability and innovation in higher education: A disabling tension? *Studies in Higher Education*, 33(3), 313–329. <https://doi.org/10.1080/03075070802049285>
- Freeman, C. (2013). *Economics of industrial innovation*. Routledge.
- Garrett, R. (2019). Whatever happened to the promise of online learning? *International Higher Education*, 97, 2–4. <https://doi.org/10.6017/ihe.2019.97.10935>
- Gibbs, G. (2014). Many patterns of teaching in HE simply follow conventions: Idea number 9. 53 Powerful Ideas. SEDA. <http://www.seda.ac.uk/53-powerful-ideas>
- Hancock, D. R., Algozzine, B., & Lim, J. H. (2021). *Doing case study research: A practical guide for beginning researchers*. Teachers College Press.
- Jakovljevic, M. (2018). A model for innovation in higher education. *South African Journal of Higher Education*, 32(4), 109–132. <https://doi.org/10.20853/32-4-2432>
- Jamil, M. G. (2018). Technology-enhanced teacher development in rural Bangladesh: A critical realist evaluation of the context. *Evaluation and Program Planning*, 69, 1–9. <https://doi.org/10.1016/j.evalprogplan.2018.04.002>
- Jessop, T., & Tomas, C. (2017). The implications of programme assessment patterns for student learning. *Assessment & Evaluation in Higher Education*, 42(6), 990–999. <https://doi.org/10.1080/02602938.2016.1217501>
- Kapasias, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., Barman, B. Das, P. & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Children and Youth Services Review*, 105194. <https://doi.org/10.1016/j.childyouth.2020.105194>

- Marinoni, G., Van't Land, H., & Jensen, T. (2020). *The impact of Covid-19 on higher education around the world*. IAU Global Survey Report, 23. International Association of Universities (IAU), UNESCO House, France.
- McAleavy, T., & Gorgen, K. (2020). *Overview of emerging country level response to providing educational continuity under COVID-19 Best practice in pedagogy for remote teaching*. Education Development Trust. <https://edtechhub.org/wp-content/uploads/2020/04/summary-research-best-practice-pedagogy-remote-teaching.pdf>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012.
- Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching*, 1–3. <https://doi.org/10.1080/02607476.2020.1755205>
- Morley, D. A., & Jamil, M. G. (Eds.). (2021). *Applied pedagogies for higher education. Real world learning and Innovation across the curriculum*. Palgrave Macmillan. <https://link.springer.com/book/10.1007%2F978-3-030-46951-1#toc>
- Murphy, M. P. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 1–14. <https://doi.org/10.1080/13523260.2020.1761749>
- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2021). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156.
- Pownall, M., Harris, R., & Blundell-Birtill, P. (2022). Supporting students during the transition to university in COVID-19: Five key considerations and recommendations for educators. *Psychology Learning & Teaching*, 21(1), 3–18.
- Reis, R. (2009). Strengths and limitations of case studies. <https://tomprof.stanford.edu/posting/1013>
- Serdyukov, P. (2017). Innovation in education: What works, what doesn't, and what to do about it? *Journal of Research in Innovative Teaching & Learning*, 10(1), 4–33. <https://doi.org/10.1108/jrit-10-2016-0007>
- Shrestha, S., Haque, S., Dawadi, S., & Giri, R. A. (2022). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and Information Technologies*, 27(1), 243–265.

- Shulman, L. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Tagg, J. (2019). *The instruction myth: Why higher education is hard to change, and how to change it*. Rutgers University Press.
- Tierney, W. G., & Lanford, M. (2016). Conceptualizing innovation in higher education. In M. Paulsen (Ed.), *Higher education: Handbook of theory and research* (pp. 1–40). Springer. https://doi.org/10.1007/978-3-319-26829-3_1
- Toquero, C. M. (2020). Challenges and opportunities for higher education amid the COVID-19 pandemic: The Philippine context. *Pedagogical Research*, 5(4), 1–5.
- Usher, A. (2020). The clock is ticking on a decision about September entry. *Wonkhe*, 24 March. <https://wonkhe.com/blogs/the-clock-is-ticking-on-a-decision-about-september-entry/>
- Van Melle, E., Frank, J. R., Holmboe, E. S., Dagnone, D., Stockley, D., Sherbino, J., & International Competency-based Medical Education Collaborators. (2019). A core components framework for evaluating implementation of competency-based medical education programs. *Academic Medicine*, 94(7), 1002–1009. <https://doi.org/10.1097/ACM.0000000000002743>
- Walder, A. M. (2017). Pedagogical innovation in Canadian higher education: Professors' perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, 54, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>
- Whitworth, A. (2012). Invisible success: Problems with the grand technological innovation in higher education. *Computers & Education*, 59(1), 145–155. <https://doi.org/10.1016/j.compedu.2011.09.023>

Part I

**Taking an Institutional Perspective
to Learning amid Disruption**



2

Interrogating the Established Knowledge and Practice Base of COVID-19 Higher Education Learning

Dawn A. Morley and Debbie Holley

Introduction

The COVID-19 Higher Education Literature Database (CHELD) became an open access repository for 138 manuscripts published between 1 January 2020 and 30 June 2020 (Butler-Henderson et al., 2020a, 2020b). These were the first publications to capture the contributions academics were making to the significant change in learning and teaching in higher education brought about by COVID-19.

Chapter 1 will complete a systematic literature review of this database to underpin the five themes identified in the edited collection. An identification will be made of the early and global higher education trends in the pandemic. Each section will highlight sources that, in the opinion of the authors, have the greatest impact on lasting higher education development as the result of the COVID-19 pandemic. Although the articles have been categorised to their main alignment with one of the five themes

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Table 2.1 Categorisation of the CHELD database

Taking an institutional perspective to learning amid disruption	45 articles
Redesigning whole programmes to meet the challenges of remote learning	13 articles
Focusing on pedagogic design in remote and blended curricula	44 articles
Restructuring assessment and feedback for online pedagogies	12 articles
Supporting student learning and wellness in lockdown	24 articles

(Table 2.1), they may be significant in other areas or have particular cross-cutting significance.

Theme-1: Taking an Institutional Perspective to Learning amid Disruption

Section 1 included contributions from the database of academics' personal reflections of the effect of the COVID-19 pandemic on their own experience of higher education, or the practical response that their universities had made to pivot learning online. Global universities debated how students would continue to have access to their HEIs with lockdown in place, and the implications of the wholesale shift to online learning for future provision. In the more immediate time frame, a need was recognised to upskill academics in online pedagogy (Al-Baadani & Abbas, 2020; Alaran et al., 2020) and this is covered more fully in Section 3. Blankenberger and Williams (2020), like others, brokered the idea that COVID-19 may act as a catalyst for a new order and ethos in higher education learning.

As universities swiftly shut down traditional face-to-face teaching, some were in a stronger position to activate devolved and more agile systems of leadership to negotiate this change (Fernandez & Shaw, 2020). This agility afforded radical and confident solutions to existing processes, such as accreditation and assessment (Blankenberger & Williams, 2020). For those universities that were more financially vulnerable, closure and

downsizing became real possibilities with long-term implications for the continuation of primary and secondary pupils' journey into higher education (Al-Baadani & Abbas, 2020; Alaran et al., 2020).

Keenly demonstrated was the existing global digital divide that became more acute during the pandemic. Alaran et al. (2020) and Al-Baadani and Abbas (2020) discuss the limited access to computers and the internet in both Sub-Saharan Africa and Yemen; further accentuated by the personal poverty of students. For these authors, the advent of the pandemic necessitated a scramble for digitalisation across international, national, NGO, private, and ICT providers to bridge the divide for marginalised students. Strategies such as recording lectures to preserve valuable data, and the greater use of radio and TV for lessons, became apparent.

Although, many universities had students who were more advantaged by the move to online education, a strong and consistent message publicised the importance of an equitable learning experience (Blankenberger & Williams, 2020). This included a more enlightened position on supporting students and academics in this significant period of disruption (Al-Baadani & Abbas, 2020). Students studying subjects traditionally dependent on work experience, such as medicine and teaching, were seen as more vulnerable to the pandemic (Al-Baadani & Abbas, 2020; Blankenberger & Williams, 2020; Alaran et al., 2020) and this is further addressed in Section 2.

Theme-2: Redesigning Whole Programmes to Meet the Challenges of Remote Learning

Thirteen papers that were featured in the collection addressed whole programme change. Interestingly, these were all in disciplines where the theory/ practice overlap was high, for example, medical education, health education, and disciplines such as journalism (Fowler-Watt et al., 2020), art (Coleman & Macdonald, 2020), and the work undertaken by a study Centre (Ross & DiSalvo, 2020). Key themes that emerged from this body of work were the focus on building of community; those

embedding changes were strategically from recruitment to the programme (e.g. Darbishire et al., 2020; Persky et al., 2020), addressing the possible scenario of medical students wishing to delay, or interrupt their studies during a period of such disruption (Compton et al., 2020); and thoughts about the process of transitions through programmes (Fuller et al., 2020). Values-based change, where the underpinning values of the educators enhanced and promoted the response to the challenges of remote learning, focused on inadequate resources for distance learning (Persky et al., 2020). The desire to offer an equivalent to face-to-face delivery and the need for enhanced communication and support from student study centres were evident (Ross & DiSalvo, 2020).

Co-designed and discipline-wide initiatives drove change, for example, De Moura Villela et al. (2020) reported that teachers developed an epidemiological information bulletin working with 10 medical students who had already undertaken basic training in public health. This became a publicly recognised website with 150 medical students proactively contributing. Zuo (2020) highlighted the programme team developing an Anesthesia Education Toolbox, an online peer-reviewed set of educational resources collaboratively developed and shared by multiple anaesthesia residency programmes across the US and abroad; and it provided a mechanism for faculty to submit, peer-review, and share educational materials. Somewhat surprisingly, the move to scaling up innovation by enhancing authentic access to practice, through mechanisms such as simulation and augmented reality, was only covered in Gagnon et al. (2020) in their paper in which the move to the SAMR model (Substitution, Augmentation, Modification, Redefinition) is advocated as the 'new norm'. Fuller et al. (2020) considered the full scope of the impact of the pandemic on experiential education in pharmacy remains unclear but are keen for a positive response to serve as a stimulus for innovation and rethinking the paradigm of how pharmacy programmes educate and prepare students for pharmacy practice.

The 'takeaways' from these papers are the scalable nature of innovation across programmes, especially when initiated by collaboration, the values-based nature of health and medical disciplines taking a learner-focused perspective as a response to the challenge to the 'tilt' to online, and the application of real-world learning principles (Morley & Jamil, 2021).

Many courses within the health care sciences excelled in their pedagogic response by using the pandemic to accelerate learning opportunities, for example, De Moura Villela et al. (2020) where students' engagement contributed to both the pandemic response and their own professional learning. This aligns specifically with one of the real-world learning principles of fidelity where students are learning in an environment that is close to reality as possible. As a result, the learning has a greater impact on both their present and long-term development (Morley, 2021).

Theme-3: Focusing on Pedagogic Design in Remote and Blended Curricula

Although both online and distance learning were familiar pedagogic concepts before the pandemic, the speed and scale of its development during COVID-19 were unsurpassed. Williamson et al. (2020) described this change as 'emergency remote education' (p. 108) and 'pandemic pedagogies' (p. 108). Dhawan (2020) highlighted the previous success of the move to online learning in earthquake and hurricane zones to re-establish higher education. Williamson et al. (2020) speculated that the use of online platforms goes beyond an emergency response but potentially heralds a new prototype for higher education.

Jayalath et al. (2020) offered a three-stage set of recommendations as to how to build a digital strategy for degree-level delivery in universities, for the short, medium, and long term. Based on a review of the work of 50 scholars, they pointed to the major barrier to change: 'the real challenge is training for changes to pedagogy' (p. 2). Gruber and Bauer (2020) reported on a consultant's progress using experiential learning online, and Ervin-Kassab (2020) on the solution in a mid-US Western college to inviting in a technology consultant and offering staff 'playdates'. Overall, universities dependent on their own resources and structures found unique ways to respond at speed to the inevitable change in their pedagogic design.

Primarily, curriculum designers did not have the time to create new courses but had to transition as best they could to an online format using

any existing university virtual learning environments. This change was complicated further if student numbers were high, or a large proportion of the existing course relied on experiential or workplace learning, that did not naturally translate to an online format (Howitz et al., 2020).

The database reflects the emergence of two types of pedagogic design during the pandemic. The first is a competent, foundational level in the use of online platforms while the second draws on more innovative design and sustainability of the curriculum in an online and distanced context.

First Level: Foundational Level Competence

As Prokopenko and Berezhna (2020, p. 132) observed; the first level started with: ‘various web servers, platforms, resources, and social media: Moodle, Zoom, Skype, Viber, Telegram, Messenger, Google-class etc’. and rapidly students and their educators were overtaken by video conferencing platforms. Universities transformed their own curriculum by a rapid rise in the use of private platforms accessed through the largest and most successful tech businesses, most notably the use of Zoom and Microsoft Teams. This was seen as a pedagogic priority across global universities once computer and internet accessibility were established (Jayalath et al., 2020). However, Ray et al. (2020, n = 199) note ‘Zoom fatigue’ in their medical classes, with 92% expressing a preference for 3 days of Zoom rather than daily slots to enable them to work on materials; and 72% did not want any online learning post-pandemic.

The well-recognised shortfalls of online communication not being able to replicate face-to-face communication were addressed by more discerning faculties. Jung and Brady (2020), working in mathematics education, ensured students addressed mathematical problems before synchronous sessions by flipping the learning. Live online session then focused on promoting dialogue and debate by the use of Zoom break-out rooms and tools, such as Google docs, for collaborative student calculations.

Second Level: Innovative Design and Sustainability of the Curriculum

Second-level pedagogic design provides examples where platforms were extended to personalise as well as deliver learning but, due to the publication time frame of the database, these examples were more unusual than first-level case studies. Like the many opportunities to extend learning by actively contributing to the professional pandemic response seen in Section 2, Abraham et al. (2020) presented an initiative where third-year medical students used Zoom with patients to increase their own expertise within telehealth accentuated by the pandemic. Van Allen and Katz (2020) advocated a greater adaptation and remixing of Open Educational Resources (OERs) to personalise and contextualise resources to students' needs. Both provide examples where tools such as Zoom and OERs extended their reach by using a more bespoke approach that responded to the potential learning context of the pandemic (Abraham et al., 2020) or the need for a more personalised learning approach created by distance learning (Van Allen & Katz, 2020).

Particular challenges were faced by curricula where a high proportion of experiential work existed pre-pandemic. Unable to find appropriate simulations, Howitz et al. (2020) described a sophisticated conversion of core chemistry laboratories to structured and highly supported replacements that involved short videos, previous data sets, and live webinars. This change required a greater appreciation of the preparation, navigation, and pacing of materials and so, out of all the pedagogic change that occurred during higher education lockdown, it was closest to a rewrite of the curriculum. Section 4 further details how simulation was extended in its scope to allow for an online context (Meyer et al., 2020). Balmaks et al. (2020) moved their traditional rapid cycle deliberate practice simulation (RCDP) for anaesthesia residents to Zoom. Participants and facilitators found themselves taking the usual roles in different locations with the changing medical condition of the 'patient' introduced through the chat function.

Theme-4: Restructuring Assessment and Feedback for Online Pedagogies

With the advent of social distancing, assessments that required face-to-face delivery were moved to an alternative virtual approach. This ensured not only students' continuing progress through courses but in some cases, such as medicine, students graduated early in order to contribute to the workforce response to COVID-19 (Sahi et al., 2020). This section highlighted both simple adaptations of existing assessment to a close online alternative and also where the pandemic acted as a catalyst for a more significant assessment change.

An already established simulation assessment that occurred with dental students was successfully moved to an asynchronous, recorded encounter (Meyer et al., 2020). Dental education also showcased examples of a shift in the emphasis of assessment towards a symbiotic assessment that included clinical reasoning, diagnostics, and critical thinking rather than assessing a single point of patient procedure (Saeed et al., 2020).

As a result of the pandemic, the move away from traditional live patient exams in dental education in the USA was accelerated to include objective structured clinical examination (OSCE) exams and tele dentistry (Saeed et al., 2020). A similar updating occurred with cadaveric dissection in the UK where, despite the many learning advantages of real cadaver dissection, the move to online alternatives kept pace more effectively with increased medical student numbers and a decrease in the number of cadavers to dissect (Longhurst et al., 2020). The pandemic therefore accelerated the move to online assessment in more traditional disciplines and ways of assessment.

Innovation afforded an increased confidence in assessment design in the use of universities' own virtual learning environments where Longhurst et al. (2020) found increased collaborative and collegiate activity both internal and external to universities. The use of learning management systems and external online proctoring has begun to be evident in dental courses in the USA (Iyer et al., 2020), and this echoes the increasing move to private, external platforms identified in Section 3.

Theme-5: Supporting Student Learning and Wellness in Lockdown

The student experience during lockdown comes to the fore from the database as attention was turned to student support and well-being, and the challenge faced by learners during the pandemic. This commentary starts with the experiences of international students in their home countries, before moving on to explore the attitudes of staff and students and outlines some key best practice areas.

Student mental health is significant to many of the papers and this emphasis is common across international universities. Pan (2020) surveyed his Chinese students and found that 85% saw their compliance with the move to online as supporting national efforts for public health. In Brazil, students were able to access online learning however did not enjoy it, due to concerns about the clinical aspects of their work and fear of failure of the year (Peloso et al., 2020). Students in the Philippines at two colleges (n = 530) were surveyed by Baloran (2020) about their attitudes to schooling, their anxiety levels, and their personal coping strategies. Personal protective methods, home-based activities with families and keeping in touch with friends using social media, and online gaming were cited. Avoiding parties, large meetings, and social contacts were common; but a significant minority looked to a medical solution for anxiety (11%). A Jordanian study (Al-Tammemi et al., 2020) cited 54% of respondents (n = 381) as the main stressor being the online studying, with protective factors being those older, and with a predisposition for distance learning. Of those surveyed 92% suffered from some degree of psychological distress, leading the authors to call for a comprehensive nationwide psychological support programme.

Staff papers are a subtheme and range from Sahu's (2020) survey with West Indies staff articulating a range of staff stress points and anxieties, to Odriozola-Gonzalez et al. (2020), who surveyed staff and students in a Spanish University, and reported students suffering more initial psychological distress than the staff. Higher education solutions ranged from a hopeful optimism (Medina et al., 2020) to Prokopenko and Berezhna (2020), who offer a more structured solution with their faculties,

agreeing to priorities for the pandemic, identifying new opportunities, and overcoming institutional challenges to become more agile in their approach. Our review did highlight some individual good practice innovations such as Johnson and Merrick (2020) with their structured Zoom sessions with conservatoire students, and Lohmann's (2020) use of weekly motivational videos.

Conclusion

An interrogation of the CHELD database offers some early insights into the emerging higher education response at the beginning of the COVID-19 pandemic and provides an interesting context to many of the chapters featured in the edited collection. At the time of publication of the data base, it should be recognised that longer-term development was overshadowed by the need for an immediate and emergency response to university lockdown. For this reason, it may be that the more traditionally popular and longitudinal areas of pedagogic research, such as assessment and feedback, are overtaken by less familiar areas that comment on the immediate need for student well-being and support. The authors therefore speculate whether the chapter contributions to the edited collection that follow may show different trends in higher education response due to the greater longitudinal ability available to them of embedding pedagogic change into the curriculum.

Although the challenges of achieving excellence in online and distance education are well documented (Morley & Carmichael, 2020), there is evidence to suggest that an unfamiliarity with elearning literature, and the speed of the online transition, often affected the quality of higher education delivery. This is triangulated by the student and staff experience presented in Section 5 on student well-being. However, the range of writing and depth of analysis across this database, written as a comparatively short time scale, offers scope for academics, practitioners, and professional services staff to draw upon. From international perspectives where anxious student voices are foregrounded, to staff and faculty struggles to reconcile differing strategic, operational, and online central

diktats, the humanity and creativity underpinning the response to an education system under challenge stand out.

Universally, higher education institutions; some with little previous internet and computer access for students, worked tirelessly to keep connected with their learners. Those universities with more advanced online capability were able to move beyond a first-level pedagogic response (as defined in this chapter) and often provided examples where learning and assessment had advanced significantly during the pandemic to the potential long-term advantage of those disciplines involved (Meyer et al., 2020; Saeed et al., 2020). As universities begin to return to face-to-face learning once more, there is no doubt that the global digital divide, that so strongly affected the speed and efficacy of the pivot to online learning, has been laid bare and is waiting to be addressed by a renewed global commitment of access to higher education.

References

- Abraham, H. N., Opara, I. N., & Dwaihy, R. L. (2020). Engaging third-year medical students on their internal medicine clerkship in telehealth during COVID-19. *Cureus*, 12. <https://doi.org/10.7759/cureus.8791>
- Alaran, A. J., Badmos, A. O., Bouaddi, O., et al. (2020). Decisive or impulsive? Re-examining Africa's lockdown response to COVID-19. *Trop Med Health*, 50, 22. <https://doi.org/10.1186/s41182-022-00414-7>
- Al-Baadani, A. A., & Abbas, M. (2020). The impact of coronavirus (COVID-19) pandemic on higher education institutions (HEIs) in Yemen: Challenges and recommendations for the future. *European Journal of Education Studies*, 7(7), 68–82. <https://doi.org/10.46827/ejes.v7i7.3152>
- Al-Tammemi, A., Akour, A., & Alfalah, L. (2020). Is it just about physical health? An Internet-based cross-sectional study exploring the psychological impacts of COVID-19 pandemic on university students in Jordan using Kessler Psychological Distress Scale. *Frontiers in Psychology*, 11, 1–11. <https://doi.org/10.3389/fpsyg.2020.562213>
- Balmaks, R., Auzina, L., & Gross, I. T. (2020). Remote rapid cycle deliberate practice simulation training during the COVID-19 pandemic. *BMJ Stel*, 0, 1–2. <https://doi.org/10.1136/bmjstel-2020-000671>

- Baloran, E. T. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss and Trauma*, 25(8), 635–642. <https://doi.org/10.1080/15325024.2020.1769300>
- Blankenberger, B., & Williams, A. M. (2020). COVID and the impact on higher education: The essential role of integrity and accountability. *Administrative Theory & Praxis*, 42(3), 404–423. <https://doi.org/10.1080/010841806.2020.1771907>
- Butler-Henderson, K., Crawford, J., Rudolph, J., Lalani, K., & Sabu, K. M. (2020a). *COVID-19 in Higher Education Literature Database (CHELD). Version 1*. Institute of Research Innovation. <https://doi.org/10.37074/jalt.2020.3.2.11d>
- Butler-Henderson, K., Crawford, J., Rudolph, J., Lalani, K., & Sabu, K. M. (2020b). COVID-19 in Higher Education Literature Database (CHELD V1): An open access systematic literature review database with coding rules. *Journal of Applied Learning and Teaching*, 3(3). <https://doi.org/10.37074/jalt.2020.3.2.11>
- Coleman, K., & Macdonald, A. (2020). What are artists and art educators teaching us about how we can conceive and deliver teacher professional learning into the future? In R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 Pandemic: Stories from the Field* (pp. 13–16). Association for the Advancement of Computing in Education (AACE). Retrieved August 8, 2022, from <https://www.learntechlib.org/p/216903/>
- Compton, S., Sarraf-Yazdi, S., Rustandy, F., & Krishna, L. K. R. (2020). Medical students' preference for returning to the clinical setting during the COVID-19 pandemic. *Medical Education*, 54, 943–950. <https://doi.org/10.1111/medu.14268>
- Darbishire, P., Schoelles-Williams, J., Petrelli, H. M. W., & Van Amburgh, J. (2020). Challenges to pharmacy school enrolment management caused by a global pandemic. *American Journal of Pharmaceutical Education*, 84(6), 660–663. <https://doi.org/10.5688/ajpe8150>
- De Moura Villela, E. F., De Oliveira, F. M., Toffoli, S. L., & Bollela, V. R. (2020). Student engagement in a public health initiative in response to COVID-19. *Medical Education*, 54(8), 763–764. <https://doi.org/10.1111/medu.14199>
- Dhawan, S. (2020). Online learning: A Panacea in the time of a COVID-19 crisis. *Journal of Educational Technology*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>

- Ervin-Kassab, L. (2020). Playing with faculty: Creating a learning management 'Sandbox'. In R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 17–22). Association for the Advancement of Computing in Education (AACE). Retrieved August 8, 2022, from <https://www.learntechlib.org/p/216903/>
- Fernandez, A. A., & Shaw, G. P. (2020). Academic leadership in a time of crisis: The coronavirus and COVID-19. *Journal of Leadership Studies*, 14(1), 39–45. <https://doi.org/10.1002/jls>
- Fowler-Watt, K., Majin, G., Sunderland, M., Phillips, M., Brine, D., Bissell, A., & Murphy, J. (2020). *Reflections on the shifting shape of journalism education in the Covid-19 pandemic*. Digital Culture and Education.
- Fuller, K. A., Heldenbrand, S. D., Douglass Smith, M., & Malcom, D. R. (2020). A paradigm shift in US experiential pharmacy education accelerated by the COVID-19 pandemic. *American Journal of Pharmaceutical Education*, 84(6), 692–696.
- Gagnon, K., Young, B., Bachman, T., Longbottom, T., Severin, R., & Walker, M. J. (2020). Doctor of physical therapy education in a hybrid learning environment: Reimagining the possibilities and navigating a 'new normal'. *Physical Therapy*, 100(8), 1268–1277. <https://doi.org/10.1093/ptj/pzaa096>
- Gruber, A., & Bauer, E. (2020). Fostering interaction in synchronous online class sessions with foreign language learners. In R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 175–178). Association for the Advancement of Computing in Education (AACE). Retrieved August 8, 2022, from <https://www.learn-techlib.org/p/216903/>
- Howitz, W. J., Thane, T. A., Frey, T. L., Wang, X. S., Gonzales, J. C., Tretbar, C. A., Seith, D. D., Saluga, S. J., Lam, S., Nguyen, M. M., Tieu, P., Renée, D., & Edwards, K. D. (2020). Online in no time: Design and implementation of a remote learning first quarter general chemistry laboratory and second quarter organic chemistry laboratory. *Journal of Chemical Education*, 97, 2624–2634. <https://doi.org/10.1021/acs.jchemed.0c00895>
- Iyer, P., Aziz, K., & Ojcius, D. M. (2020). Impact of COVID-19 on dental education in the United States. *Journal of Dental Education*, 84, 718–722. <https://doi.org/10.1002/jdd.12163>

- Jayalath, C., Wickramasinghe, U., Kottage, H., & Somaratna, G. (2020). Factors influencing orderly transition to online deliveries during COVID19 pandemic impact. *Asian Journal of Education and Social Studies*, 9(2), 10–24.
- Johnson, C., & Merrick, B. (2020). Enabling music students' well-being through regular Zoom Cohort Chats during the COVID-19 crisis. In R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 261–264). Association for the Advancement of Computing in Education (AACE). Retrieved August 8, 2022, from <https://www.learntechlib.org/p/216903/>
- Jung, H., & Brady, C. (2020). Maintaining rich dialogic interactions in the transition to synchronous online learning. *Information and Learning Sciences*, 121(5/6), 391–400. <https://doi.org/10.1108/ILS-04-2020-0096>
- Lohmann, M. J. (2020). Using motivational videos to support student engagement. In R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 687–690). Association for the Advancement of Computing in Education (AACE). Retrieved August 8, 2022, from <https://www.learntechlib.org/p/216903/>
- Longhurst, G. J., Stone, D. M., Dulohery, K., Scully, D., Campbell, T., & Smith, C. F. (2020). *Strength, Weakness, Opportunity, Threat (SWOT) analysis of the adaptations to anatomical education in the UK and Republic of Ireland in response to the COVID-19 pandemic*. *Anatomical Science Education*, 298–308.
- Medina, M. S., Melchert, R. B., & Stowe, C. D. (2020). Fulfilling the tripartite mission during a pandemic. *American Journal of Pharmaceutical Education*, 84(6), 683–687. <https://doi.org/10.5688/ajpe8156>
- Meyer, B. D., Fearnow, B., & Quinonez, R. B. (2020). Asynchronous paediatric caregiver simulation in a virtual setting during the COVID pandemic. *Journal of Dental Education*, 1–3. <https://doi.org/10.1002/jdd.12319>
- Morley, D. A. (2021). Conclusion: Real world learning—Researching and co-constructing working definitions for curriculum development and pedagogy. In D. A. Morley & M. G. Jamil (Eds.), *Applied pedagogies for higher education*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-46951-1_17
- Morley, D. A., & Carmichael, H. (2020). Engagement in socio constructivist online learning to support personalisation and borderless education. *Student Engagement in Higher Education Journal*, 3(1), 115–132.

- Morley D. A., & Jamil M. G. (Eds.). (2021). *Applied pedagogies for higher education. Real world learning and Innovation across the curriculum*. Palgrave Macmillan. <https://link.springer.com/book/10.1007%2F978-3-030-46951-1#toc>
- Odriozola-Gonzalez, P., Planchuelo-Gomez, A., Iruiria, M. J., & De Luis-Garcia, R. (2020). Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry Research*, 1–8. <https://doi.org/10.1016/j.psychres.2020.113108>
- Pan, H. (2020). A glimpse of university students' family life amidst the COVID-19 virus. *Journal of Loss and Trauma*, 25(6), 594–597. <https://doi.org/10.1080/15325024.2020.1750194>
- Peloso, R. A., Ferruzzi, F., Mori, A. A., Camacho, D. P., Da Silva Franzin, L. C., Margioto Teston, A. P., & Freitas, K. M. S. (2020). Notes from the field: Concerns of health-related higher education students in Brazil pertaining to distance learning during the coronavirus pandemic. *Evaluation and the Health Professions*, 43(3), 201–203. <https://doi.org/10.1177/2F0163278720939302>
- Persky, A. M., Fuller, K. A., Jarstfer, M., Rao, K., Rodgers, J. E., & Smith, M. (2020). Maintaining core values in postgraduate programs during the COVID-19 pandemic. *American Journal of Pharmaceutical Education*, 84(6), 697–702. <https://doi.org/10.5688/ajpe8158>
- Prokopenko, I., & Berezhna, S. (2020). Higher education institutions in Ukraine during the coronavirus, or COVID-19, outbreak: New challenges vs new opportunities. *Romanian Journal for Multidimensional Education.*, 12(1). <https://doi.org/10.18662/rrem/12.1sup2/256>
- Ray, M., Saha, S., & Ghosal, A. K. (2020). A study on students' perceptions for online zoom-app based flipped class sessions on anatomy organised during the lockdown period of COVID-19 Epoch. *Journal of Clinical and Diagnostic Research*, 14(6), AC01–AC04. <https://doi.org/10.7860/jcdr/2020/44869.13797>
- Ross, A. F., & DiSalvo, M. L. (2020). The Harvard Language Center's response to the COVID-19 crisis. *Foreign Language Annals*, 53(2), 371–379.
- Saeed, S. G., Bain, J., Khoo, E., & Siqueira, W. L. (2020). COVID-19: Finding silver linings for dental education. *Journal of Dental Education*, 84, 1060–1063.
- Sahi, P. R., Mishra, D., & Singh, T. (2020). Medical education amid the COVID-19 pandemic. *Indian Pediatrics*, 57, 652–657.
- Sahu, P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), e7541. <https://doi.org/10.7759/cureus>

- Van Allen, J., & Katz, S. (2020). Teaching with OER during pandemics and beyond. *Journal for Multicultural Education*, 14(3/4), 209–218. <https://doi.org/10.1108/JME-04-2020-0027>
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>
- Zuo, L. (2020). Learning at home during COVID-19: A multi-institutional virtual learning collaboration. *Medical Education Adaptations*, 54(7), 664–665. <https://doi.org/10.1111/medu.14194>



3

Exploding Hierarchies for Educational Change: Leveraging ‘Third Spaces’ within Solent University’s Transformation Academy

Karen Heard-Lauréote and Carina Buckley

Introduction

Responding to COVID-19, UK Higher Education Institutions (HEIs) underwent an online shift (Adams, 2020). While initial activity supported emergency responses (e.g. Sandars et al., 2020), as the first lockdown from March 2020 endured, more sustainable and effective online learning programmes emerged (Feldman, 2020; McKie, 2020). To operationalise this online learning and teaching (L & T) delivery move, many UK HEIs have embarked on a rapid deployment of change projects (Crawford et al., 2020).

This case study aims to explore how and to what extent the Transformation Academy (TA), a major cross-institutional change project delivering sustainable L & T during the period of Solent University’s online pivot, triggered the explosion of traditional hierarchies within the L & T centre, coalescing teams of previously dispersed roles for implementation.

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To do this, the chapter proceeds in three main sections. The first explores the literature of communication and decision-making in a context of exploded hierarchies and how it allows for greater innovation and more open, collaborative working. The second section introduces the study's case study and research design while the third discusses the results and the key findings emerging from the data analysis. The chapter concludes by supplying insights about the long-term cultural change possible when collaboration moves beyond short-term, project-based scenarios.

Contextual Background

The notion of breaking down hierarchies is most usually associated with the organisational studies and human resource management literature (cf. Pinchot & Pinchot, 1996) where it is a phenomenon driving organisational efficiency and effectiveness. This is based on the premise that rigid hierarchies can stifle flexibility and innovation and be at the root of corporate decay. The notion goes hand in hand with concepts of distributed decision-making (cf. Schneeweiss, 2012) where authority is distributed throughout larger organisations to mitigate against major issues arising in traditional hierarchies. For example, communication across organisations tends to be less effective, inter-departmental rivalries manifest themselves as 'turf wars', and decision-making benefits departmental interests rather than whole organisations.

The breaking down of hierarchies is a notion that the Higher Education (HE) sector has coined, especially in the UK, where HE increasingly operates akin to corporate business models linked to the growing marketisation of HE (Molesworth et al., 2010). Within HE, the explosion of traditional hierarchies also includes various emerging and developing practices including so-called co-creation with students (Bovill, 2014), which puts students at a level of parity with Faculty in such activities as curriculum design and the development of institutional policies and practices aimed at enhancing the student experience.

L & T centres within HEIs are often locations of defined hierarchies or at best siloing (Harland & Staniforth, 2008), a mindset that occurs when certain departments or sectors resist information sharing with others in

the same organisation. This siloing is often apparent between educational developers (those responsible for developing the teachers) and front-line academic staff (those responsible for doing the teaching). According to Magruder (2019, p. 55), for example, 'Educational development literature is replete with explorations of the field's marginalization despite its role improving teaching and learning'.

The long-standing rift between educational development or those in roles as academic developers and educational technology or those in roles of learning technologists within HE L & T centres (Trust et al., 2017) is another specific and well-rehearsed example of siloing within the educational development community, and the focus here.

Despite these differences and divisions, the problem of silos is not inevitable, and some parts of the academy actively resist incorporation into narrow spheres of activity and influence. 'Third space' was coined by Celia Whitchurch (2008) to describe those in HE straddling the divide between the academic and non-academic, teaching and non-teaching. Likely to be found in collaborative, multi-professional teams, working on broad-based, university-wide projects, third space professionals tend to operate via light touch, self-managing teams focusing on the dialogue and negotiation of empowering leadership, rather than the requirements and control of hierarchical management (Whitchurch, 2015). Their ambiguous position allows them to leverage relationships and networks, challenge structures and roles, and gain legitimacy in areas outside of their official zone of activity (White et al., 2020). Their multiplicities of viewpoints, meanings, and practices allow for what Quinn (2010, cited in Parkes, 2018, p. 4) describes as the 'un-self' or 'a becoming', a type of reflexive adaptation and development that draws on context and interaction, unconstrained by role title or job description. The benefit of third space professionals therefore lies in their ability to bring different stakeholders together. With its capacity to bring together educational developers, instructional designers, learning technologists, and teaching staff, online learning has been identified by Whitchurch (2008, 2015) as a site for third space activity.

Our data show that Solent's Transformation Academy (TA) project has acted as a third space, supporting the creation of mobile and flexible teams that cut across boundaries and which are based more on relationships rather than roles and hierarchies.

Research and Evaluation Procedure

Internally titled Transformation Academy and led by Solent Learning and Teaching Institute (SLTI), the project has since grown into a larger staged project set to last until 2023. The focus of this chapter is on TA phase 1 which ran from May to September 2020 with the sole aim of preparing academic staff to deliver 150 courses, including 1100 modules, partially or mainly online in the first semester of the 2020/2021 academic year.

Project success meant overlooking established role titles, traditional remits, and formal line management structures, shifting the focus to SLTI staff's core skills and competencies. As such, the TA drove a full, fluid, and atypical collaboration between Academic Development and Learning Technologies staff often compartmentalised in L & T organisational structures.

In a staged developmental process where course teams worked together on their course vision and identity, guided by the Analysis, Design, Development, Implementation, and Evaluation cycle (ADDIE model) of instructional design (Morrison et al., 2010), the project team modelled the necessary community building and interaction.

Adopting a qualitative empirical research design and single, local, and exploratory case study approach, data are derived from a series of ethically approved, semi-structured exploratory interviews with project members operating outside their usual hierarchies in the TA project implementation to explore the phenomenon of exploded hierarchies.

The interview sample was compiled from a total population of 76 TA project members, drawn from the four teams structured under the Pro Vice Chancellor. The operational lead for the project was the Head of Learning and Teaching (HoLT), who negotiated an allocation of staff from the other three Heads. New TA project staff members were allocated across six teams within the TA working under their designated team lead but did not formally change line management reporting (Table 3.1).

Out of those 76, a purposive sample was based on two key criteria. First, interviewees had to be working outside of their usual team structure and within one of the TA sub-teams led by a person not their usual line manager. Second, they had to be working on priorities not ordinarily assigned to them.

Table 3.1 Hierarchical structure, composition of TA teams, and their function and role in TA project

PVC students and teaching	Head of learning and teaching	Head of learning technologies	Head of student experience	Head of specialist facilities
Sphere of influence	Academic staff and professional services facing and curriculum focused	Academic staff and student facing and technology focused	Student facing and student focused	Academic staff and student facing and resources and facilities focused
Organisational role	L & T academics (developers) and L & T professional support	Instructional design Learning technologists Systems development	Careers (employability and enterprise) Student achievement Student mental health and wellbeing	Technical instructors and technical assistants Timetabling
TA sub-team and function/work in TA	Solent student inclusive curriculum consultants TEAM 1: Intensive support for courses with low digital competence and confidence plus reviewing ADDIE questionnaires and checking final quality	TEAM 4: Content building and checking of content of pilot modules	TEAM 2: Audit against course and module templates	TEAM 4: Content building and checking content of pilot modules
	TEAM 3: Student inclusive curriculum consultants reviewing SOL content for inclusivity and accessibility TEAM 6: 2 x external consultants advised on initial project set-up, template design, and content-building for example course and module SOL pages	TEAM 5: Releasing courses and modules and ensuring enrolment		

Based on these criteria, we identified 56 potential interviewees; too many to interview during the project's busy period of operationalisation. Therefore, we used a convenience sampling approach to select a 20% sample of those most likely to have availability to talk to us. In sum, we interviewed 11 members of staff constituting almost 20% of the eligible population. To negate conflicts of interest, no interviews were conducted within formal line management structures. All participants were invited to confirm their informed consent and understood their right to withdraw at any time.

The semi-structured interviews were built around 12 main questions that focused on the interviewees' roles and relationships during the TA project, with space for interviewees to reflect on their experiences. Interview duration was on average 25 minutes. Given the continuing pattern of remote working at the case study university, interviews were conducted via Teams and recorded for the purposes of transcription before being deleted. All the interviews were conducted by the authors within a two-week window towards the end of the project.

The data were analysed in NVivo using a thematic content analysis approach. We looked for patterns across the data set, transferring these themes into codes and assigning them to the data set. From this we were able to present the results and findings according to these key themes and as discussed in the following section.

Results and Findings

The following section explores four key themes derived from the qualitative data in response to the question of how and to what extent the TA triggered the explosion of traditional hierarchies within the L & T centre by coalescing teams of previously dispersed roles for implementation. These are: (1) the collaborative work triggered by the TA; (2) the TA's capacity to broaden what were previously clearly defined and siloed roles and widen professional perspectives; (3) as a result of collaboration and broadening perspectives the TA facilitated the breaking up of usual reporting lines; and (4) the TA's capacity to engender institutional and cultural change. The remainder of this section explores each of these themes in turn.

Collaborative Working

The first theme that emerges from the data relates to the TA's significant impact in triggering collaborative working between and across teams not usually working together.

Like many HEIs, from March to May 2020 and in response to the pandemic, colleagues worked at speed to transition teaching and assessment from face-to-face to online during the final weeks of term. While student feedback was positive, such ad hoc changes at the modular level were unsustainable in the longer term and incompatible with our commitment to a robust and sound student experience for all. As the initial crisis endured, staff recognised that course-wide and university-wide services and experiences would be limited in September 2020 and would need to be woven into an online experience. Finally, we knew that confidence in online teaching was uneven and so the transition would only be successful if academic colleagues were supported to develop their skills and share their experiences. As a result, the aim of the TA was to provide a supportive and structured approach to ensure that all course teams were able to transition their virtual learning environment (VLE) course and module pages to create an immersive and rich online learning experience for students from September 2020.

Following a series of previous restructures, by May 2020 the SLTI team was incredibly lean and therefore unable to undertake the scale of work required to deliver this aim. Driven by crisis mode, project scope, the time-critical nature and required pace of work, the institution granted SLTI permission to work outside its own formal boundaries, giving an operational lead of the TA project to the HoLT, a role which naturally lends itself to working across professional services and academic course teams. The institutional structure also lent itself to promoting cross-team working, with the PVC Students and Teaching role providing oversight for four service areas within its portfolio. Consequently, the PVC tasked these four service areas with working together under the HoLT to deliver the TA phase 1 work.

Our findings show four key attitudes towards collaborative working in the TA. First, one TA project member positively experienced the TA work

as ‘highly collaborative’ specifically in relation to ‘having a wider team to share ideas with and work’ (Int. 1, 2020). Another team member stated that the TA project’s value is in its ability to act as a ‘driver for engagement’ between professional service areas and the academic community (Int. 4, 2020), a relationship that is often divided. Second, according to some TA project members, its success depended on having the opportunity to work with other people. One interview respondent explained:

It’s the coming together of all the departments as well ... like instructional design, Library, SLTI. If all of those services aren’t working together in a cohesive way, it would be an absolute nightmare. (Int. 8, 2020)

Another interviewee recognised that although in the TA,

Everyone’s got their different roles ... it’s definitely been connected and joined up, and I think that has made it a success. I think if people had been too concerned with staying in their own little bunkers it wouldn’t have worked. (Int. 1, 2020)

The consensus of respondents suggests that ‘working dynamically across teams ... was essential’ for project success. Indeed, ‘the success of the university depends on people not just saying, oh, I work in my silo and don’t go beyond that’ (Int. 4, 2020). Third, enhanced TA-based collaboration has motivated previously unconnected teams, by showing ‘what we can do and how we can do so’ (Int. 5, 2020). Another respondent agreed that it ‘massively helps’ when you’ve got ‘committed ... people who work hard’ (Int. 8, 2020). Finally, the TA brought about a depth and intensity of collaboration which suggests change will endure rather than being superficial and short-lived, with one respondent believing that the TA project has ‘laid the foundations for long term collaboration’ and ‘established ... early relationships’ with academic teams around the university (Int. 2, 2020). The benefits were also plain for a second respondent, who felt their team had ‘become a lot more visible, through the TA’, which they saw as being ‘really very, very beneficial to me and to the team as a whole’ (Int. 4, 2020).

Broadening Roles and Widening Perspectives

The second central theme relates to the TA's capacity to broaden previously clearly defined and siloed roles and widen professional perspectives. Project members saw parts of the university and its functioning in a way that they would not normally have done, thus effectively opening the university up to the wider scrutiny of a broader staff base.

Our data show four main insights in this area. First, the TA's power lay in giving project members permission to step outside their usual work parameters. According to one respondent,

the work itself is genuinely nothing like anything I've done before ... it's been really eye opening to see it from ... [the academic] perspective and actually to be given the opportunity to provide insight. (Int. 6, 2020)

Tempered with the necessity to provide training in new areas of work, benefits were derived from expanded team members using their varied backgrounds and 'expertise with working with students' and 'to transfer that skill set to this project' (Int. 9, 2020), which was 'interesting' and 'excit[ing]' (Int. 6, 2020). Second, the TA was a catalyst for giving project members access to people and material they would not have habitually encountered, giving individuals enhanced insight into strategic work. The TA provided opportunities to develop skills around creating accessible and inclusive online content and provided a 'fresh kind of perspective' (Int. 6, 2020) by broadening the purview of these professional services staff to include academic terminology and priorities.

For one respondent the TA work and the in-house training 'really [made us] think about our delivery to students ... so we've ... found ... a more advanced level ... in terms of what we can now do' (Int. 5, 2020). Another interviewee notes that the TA

opened up a lot of doors for my team to have those conversations with academic staff that really have long been key to the role of my team ... historically, sometimes they had a harder job opening the door in some departments than others. (Int. 4, 2020)

Another stated, 'I think when everything's thrown into a crisis ... you get a better picture of under the hood of ... how things happen' (Int. 2, 2020).

Third, the new work broadened project members' professional perspectives and allowed them to step outside the boundaries of their normal formal role, inspiring future direction as well as supplying fresh insight into the impact of their actions. Consequently, undertaking new work allowed TA team members, finally, to enhance their personal and professional profile which in turn increased project loyalty and improved chances of project success, as well as increased loyalty to the institution through the opportunity to contribute to its overall direction. Moreover, some team members were pleased to see the renewed prominence of their often-unrecognised work:

Instructional design is suddenly something that people are aware of. ... We're acknowledged ... in both the teaching and learning side, as well ... the technology side. So ... professionally that's been a big, big boost to what we do. (Int. 2)

The outcome across participants was a rise in status, commensurate with recognition of how their work has contributed so positively to an engaging, inclusive, and accessible student experience.

The Breaking Up of Usual Reporting Lines

The third central theme emerging from the data relates to the impact of the previous two. Resulting from its capacity to promote collaboration and broaden perspectives, the TA facilitated the breaking up of usual reporting lines. Indeed, collaboration in the cross-institutional TA project broadened personal and professional perspectives. As a result, the TA disrupted some strongly held ways of working—with engrained siloed working very prevalent in the institutional psyche. The interview responses highlighted three specific aspects of this. First, TA team members were generally highly aware that they were operating outside their usual formal hierarchies and team roles. One interviewee stated that 'it's not an alien concept to be taking direction from somebody who isn't your line manager. That's something that we're all quite familiar with from

previous projects' (Int. 4, 2020), and for another, 'it was quite obvious that this was outside of the team and department even' (Int. 6, 2020). Second, our data show that generally people were happy with this approach and to work in this way. According to one interviewee, 'the whole management structure thing is not something I've ever been involved with. I'm ... more ground level ... I don't really mind what's going on above me' (Int. 7, 2020). Another interviewee reports:

Obviously I was made aware of it, but I don't think it necessarily impacted what I did because it was just more of what we do ... I'm not worried too much about the whole structure part of it, it's ... getting the job done. (Int. 3, 2020)

Thirdly, respondents perceived this new way of working as long-overdue, refreshing, and an invigorating change of direction opening up new professional opportunities in contrast to silo-working. According to one,

the scale of [the TA] ... was obviously ... huge [and] necessary, but it didn't feel daunting and so I think I was ... quite excited to be involved in something that I had essentially been trying to achieve the last four years without any real success so I could see that it would mean quite big changes for the University ... and ... a huge change ... for teaching staff. (Int. 1, 2020)

Another interviewee reports, 'the idea of SOL, and looking in depth at what the academics are building on their course pages ... was not part of our life. It's completely flung it open' (Int. 9, 2020), and another one states:

I think ... positives have come out of this situation ... we've had to just radically change everything so quickly. It's almost taken away the opportunity to say, oh, we can't do that. (Int. 8, 2020)

The Capacity to Engender Change

The final overarching theme emerging from our data relates to the TA's capacity to engender change, derived from project members' enjoyment of the work carried out. Our data show that culture change embedded

within a major cross-institutional project like the TA works more effectively when staff see their contribution to fundamental and strategically aligned University work. This naturally gave staff an enhanced sense of purpose in an uncertain context and a feeling of doing the right thing by students thus de-centring personal concerns. Three particularly illuminating themes emerged during the interviews in relation to this phenomenon. First, while COVID-19 generated individual staff feelings of isolation, anxiety, and disconnectedness from the workplace and colleagues, the TA provided a focal point for activity and energies and a hook to hang their institutional belonging on. One interviewee reported that

in a funny sort of way, I think it's been the best thing that could have happened during this weird period of time because ... it's really focused ... [and] occupied my mind. Maybe if I'd been doing things that hadn't been so challenging, I would have had more time to think or dwell on things, or I might have felt less motivated because it's been quite different working in your own home environment as well and not being in your work situation. (Int. 7, 2020)

Second, the TA project empowered staff to feel part of something bigger than their individual difficulties taking them away from personal contexts and unease with the wider medical, economic and social situation to consider the student experience in September. As one interviewee stated, 'I think having something like this and this engaging to work on while we've been at home has also been really useful and having more people to draw on' (Int. 1, 2020).

Finally, the TA project was highly student-focused and outwardly facing. Given Solent's long tradition as a student-centred university, the TA work played into peoples' natural tendencies to do everything possible to support students. Indeed, one interviewee asserted,

I think that's been the most rewarding part of this project, knowing that ... we're supporting our students and we're giving them the best possible service that we can within these really challenging times. (Int. 5, 2020)

Long-term Impacts

In our exploration of how and to what extent the TA triggered the explosion of traditional hierarchies within Solent's L & T centre, we found the project catalysed four critical changes: (1) enhanced collaborative working between and across teams; (2) the broadening of previously clearly defined and siloed roles along with the widening of professional perspectives; (3) the breaking up of usual reporting lines and previously established formalised hierarchies; and (4) the engendering of institutional and cultural change.

These findings align with the key features of an exploding hierarchies context. First, the TA was an obvious catalyst for enhanced communication. Indeed, project participants confirmed that the TA promoted positive and effective ways of working such as improved communication between teams and across the organisation (Pinchot & Pinchot, 1996) and greater appreciation and understanding of how individual teams fit into wider University work, and therefore generated greater staff motivation to see projects through to a successful end for the organisation's common good.

Second, the TA formalised an already-emergent pattern of distributed decision-making (Schneeweiss, 2012) at Solent, in that decisions taken in relation to the project benefited the organisation as a whole rather than specific departmental interests.

Finally, the TA qualifies as a third space (Whitchurch, 2008) where academic and professional services coalesced in collaborative and multi-professional teams on a broad-based project. The TA also supported the creation of mobile and flexible teams that cut across boundaries, based more on relationships rather than roles and hierarchies. This was nowhere more evident than in the SLTI team itself. Usually formally and structurally divided between learning technologies and learning and teaching under two separate heads, with operational lead for the TA assigned to the HoLT, SLTI's dual functions were brought together for efficiency and to maximise implementation at pace.

Triggered by the TA, these new ways of working at Solent have a potentially valuable ripple effect beyond the project's lifespan. Rather

than tailing off with the end of the project, their continuance is likely to contribute to increasing institutional cohesiveness and staff efficacy going forward. If the explosion of traditional hierarchies seen throughout the first TA project phase becomes institutionally engrained, long-lived, and sustainable, rather than project-based and short-term, this perpetuation could in turn provide the foundation for long-term cultural change with the equal value attributed within HEIs to both academics and those who develop academics. In an effort to eradicate siloing, such cultural change could ideally become formalised through a re-structure of SLTI, whereby learning and teaching become the nexus around which all aligned nodes cluster including, for example, learning technologies, course quality assurance, employability, and assessments.

References

- Adams, R. (2020, March 12). UK universities switching to online lectures and exams. *The Guardian*. <https://www.theguardian.com/world/2020/mar/12/uk-universities-switching-to-online-lectures-and-exams>
- Bovill, C. (2014). An investigation of co-created curricula within higher education in the UK, Ireland and the USA. *Innovations in Education and Teaching International*, 51(1), 15–25.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., et al. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 1–20.
- Feldman, P. (2020, June 5). *Embracing the future of learning and teaching*. Universities UK. <https://www.universitiesuk.ac.uk/topics/covid/embracing-future-learning-and-teaching>
- Harland, T., & Staniforth, D. (2008). A family of strangers: The fragmented nature of academic development. *Teaching in Higher Education*, 13(6), 669–678.
- Magruder, E. D. (2019). Degrees of marginalization: 'Adjuncts' and educational development. *New Directions for Teaching and Learning*, 2019(159), 55–64.
- McKie, A. (2020, April 14). Has the leap online changed higher education forever? *Times Higher Education*. <https://www.timeshighereducation.com/news/has-leap-online-changed-higher-education-forever>

- Molesworth, M., Scullion, R., & Nixon, E. (Eds.). (2010). *The marketisation of higher education*. Routledge.
- Morrison, G. R., Ross, S. M., Kemp, J. E., & Kalman, H. (2010). *Designing effective instruction* (6th ed.). John Wiley & Sons.
- Parkes, S. (2018, October). A learner developer perspective: Critiquing dominant practices and cultures within university spaces. *Journal of Learning Development in Higher Education*. <https://journal.alдинhe.ac.uk/index.php/jldhe/article/view/464>
- Pinchot, G., & Pinchot, E. (1996). *The intelligent organization: Engaging the talent & initiative of everyone in the workplace*. Berrett-Koehler Publishers.
- Sandars, J., Corriea, R., Dankbaar, M., de Jong, P., et al. (2020). Twelve tips for rapidly migrating to online learning during the Covid-19 pandemic. *MedEdPublish*, 9(1), 82. <https://doi.org/10.15694/mep.2020.000082.1>
- Schneeweiss, C. (2012). *Distributed decision making*. Springer Science & Business Media.
- Trust, T., Carpenter, J. P., & Krutka, D. G. (2017). Moving beyond silos: Professional learning networks in higher education. *The Internet and Higher Education*, 35, 1–11.
- Whitchurch, C. (2008). Shifting identities and blurring boundaries: The emergence of *Third Space* professionals in UK higher education. *Higher Education Quarterly*, 62(4), 377–396. <https://doi.org/10.1111/j.1468-2273.2008.00387.x>
- Whitchurch, C. (2015). The rise of third space professionals: Paradoxes and dilemmas. In U. Tiechler & W. C. Cummings (Eds.), *Recruiting and managing the academic profession*. Springer.
- White, S., White, S., & Borthwick, K. (2020). Blended professionals, technology and online learning: Identifying a socio-technical third space in higher education. *Higher Education Quarterly*. <https://doi.org/10.1111/hequ.12252>



4

Evaluating Microlearning: A Cross-faculty Case Study of a Sino-foreign University

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Background

Emergency remote teaching (ERT) is a term that emerged at the start of the COVID-19 pandemic. Since, many institutions have pivoted to it during lockdowns. This term has been commonly used in literature to describe any ad-hoc adjustments that have been made to teaching and learning delivery methods to compensate for the lack of face-to-face contact with the students. Hodges et al. (2020) make a clear distinction between emergency remote teaching and carefully planned online courses. The main disparity between the two can be seen in different expectations from the outset. Further, there is also a large degree of improvisation due

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to time constraints associated with emergency remote teaching. Hodges et al. (2020) add that such a mode of delivery is temporary in character.

Emergency remote teaching was initiated at the University of Nottingham Ningbo China (UNNC) in February 2020. Mainland China, being at the epicentre of the pandemic, was under a strict government lockdown and saw families in different provinces unable to leave their households for several weeks. The uncertainty was also reflected in the teaching and learning environment where students' learning lacked specifics and any long-term planning. The unprecedented situation put considerable demands on teachers, who had to fundamentally shift their delivery modality and redesign their curricula accordingly. This pivot led to novel learning needs, and differing expectations of students to those in a traditional educational setting. Teachers had to find a way to engage with, monitor, and assess students in a new teaching and learning delivery environment which needed to be convenient, attractive, yet relatively simple to access and easy to use by all students, irrespective of their technical skills and motivation.

These sudden changes put additional demands on students who had limited experience with online learning and were learning how to quickly adapt to this new situation. This was certainly the case in this context, as undergraduate students tend to require additional support when adjusting to a new learning environment (Dickinson, 2020; Fawns et al., 2020). This was particularly important due to high levels of uncertainty that our students were experiencing during that time.

Challenges Presented by Lockdown

In the home, the lockdown situation created an increased demand for space, computers, and internet access, as well as for quiet to focus on work or learning. Many families in China rely on the support from grandparents; in just under a third of households, there are three generations living together under one roof (National Bureau of Statistics of China, 2019). Students often lacked support in adjusting to this new learning environment. Parents were likely to have their distractions with working from home and typical family setups often meant other relatives

such as grandparents were in the same household. These aspects often resulted in students being unable to have longer, uninterrupted time for study.

Internet access proved a particular obstacle for students in China, home broadband connection is widely used, even in very remote areas (National Bureau of Statistics of China, 2019). However, with many people potentially connected to the internet together in one household, bandwidth decreases, leading to poor connectivity and low download speed. This can negatively affect the overall learning experience, particularly when it is being delivered or supplemented with large video files. The bandwidth issue is consistent with the situation in the Higher Education setting in the UK (Dickinson, 2020; Fawns et al., 2020; Markowitz, 2020), Vietnam (Maheshwari, 2021), India (Muthuprasad et al., 2021), and Thailand (Todd, 2020). These studies have found that poor connectivity and internet speed can negatively affect engagement. This additional pressure can have a direct effect on the Virtual Learning Environment, which at UNNC is the Moodle (Module Object-Oriented Dynamic Learning Environment) platform. All these factors combined made streaming and downloading potentially difficult and frustrating for students when attempting to access course materials via the Virtual Learning Environment (Gill, Irwin, Towey, et al., 2020a).

According to the UNNC Staff and Student survey conducted in the early stages of the lockdown of 2020, access to a computer was a problem for some students. Nearly 10% of them lacked access to a computer and had to resort to using portable devices, such as tablets and smartphones. Even those with computer access often had to share with other family members working from home at that time. Since a laptop is also a portable device, it typically needs to use WiFi to connect to the internet which has the risk of an unstable connection, subject to drop-outs and low speed. This challenging situation was highlighted by student responses in the Staff and Student Survey, citing technical problems when trying to access digital materials.

In addition to the difficulties with access to a desktop computer and bandwidth, there were also other issues related to streaming of long lectures. Synchronous and asynchronous lectures, delivered in a traditional one-hour-long format, were potentially overwhelming for students who

were having to adapt to the new mode of teaching and learning in an unfamiliar setting. Some teachers divided their lectures into shorter chunks, making it more accessible to students. However, Gill et al. (Gill, Irwin, Ng, et al., 2020b) argue that shorter video clips are better when adapted and fit into the course in a more strategic manner, instead of being simply cut-outs of an existing lecture. This could be achieved through follow-up activities, such as quizzes, polls, gaps fill and matching tasks as well as forum discussions. While such teaching and learning environments look more coherent and potentially appealing to the learner, we would suggest designing online learning in a different way, to be better able to address learning outcomes. Research suggests that compared with longer videos that recreate lectures, shorter videos focused on a single learning outcome can better support individual learning needs (Buchem & Hamelmann, 2010) as the information is broken down into 'bite-sized' chunks (Gill, Irwin, Ng, et al., 2020b).

Microlearning

Microlearning has shown promise in responding to these unique needs of students attempting to adapt to the remote learning environment. Microlearning helps students fit learning intervals into their daily routine in lockdown while having limited access to a quiet space, electronic devices, and the internet. In principle, microlearning should consist of shorter videos that are easier to access and consequently avoid unwanted distractions (Markowitz, 2020). Focused on single learning outcomes, microlearning can prevent overload and anxiety caused by high demands placed on learners. It promises more effective and enjoyable learning experiences thanks to its flexible nature that allows students to learn at their own pace; anytime, anywhere (Gill, Irwin, Ng, et al., 2020b). Videos using microlearning can be standalone clips, but the very nature of microlearning prompts students to complete additional tasks related to the video. This combination, if well designed and supported by teachers, allows students to fully engage with the materials. When high engagement is realised, there is generally a positive effect on academic performance (Beer et al., 2009).

Learning Analytics

Due to lack of face-to-face contact, it is important to regularly track student engagement with the new teaching and learning mode. Learning analytics is a relatively new tool in higher education, which allows educators to collect and analyse data related to student online engagement. This information provides evidence of student activity online and can then be used to inform teachers and help to identify areas in which students are not engaging, while highlighting those which are successful. Such data can be instrumental in improving quality of teaching and learning materials (Panopto, 2021). While a high level of student engagement with video material does not detail all aspects of their learning, it can often help identify individuals who need extra support (Summers et al., 2020) or inform future decisions with regard to the course content and the lesson-delivery method. Critics argue that data generated by analytics can be ‘ambiguous’ (Siemens, 2014, p. 2) and only showing engagement but not performance (Gasevic et al., 2016). While this may be true, analytics needs to be supported by evidence of student engagement with follow-up tasks completed during or after watching a microlearning video content. Such evidence paired with data from analytics can offer insight into student performance.

Panopto

Panopto was identified as a potential solution to the internet problems outlined above. This platform allows subscribers to host video content on a local server, which improves accessibility and connection speed. This content can then be easily accessed using most web browsers. Panopto boasts minimal delays due to buffering which generally results in a higher-quality viewing experience. Additional features allow for multiple streams and seamless switching between different sources on the platform (Panopto, 2021). Based on our experience, Panopto has two main advantages in Emergency Remote Teaching: easy access and tracking. The former can be helpful to students with limited or poor connectivity in their

households, while the latter allows teachers and content creators to track student engagement with every video via the analytics outlined above.

During the lockdown, there were several courses that utilised microlearning in their design.

Case Study 1

At the beginning of the lockdown at HEA1, microlearning was introduced in the Product Design and Manufacture (PDM) programme, within a year 2 undergraduate class of 52 students, which focuses on teaching fundamental perspective-sketching and marker-rendering techniques relevant to the product design industry. Prior to the lockdown, the class was taught face to face, using live demonstrations, examples, and lectures which presented each technique to students, and were assessed through in-class tests. The main reported issue with this arrangement was that, as the techniques became more complex over the course of the academic year, the duration of the live demonstrations increased, resulting in little to no time for formative feedback as the class progressed. Moreover, due to time constraints, the live demonstrations were often introductory or simplified, and rarely applied in more advanced contexts.

In light of these issues and due to the lockdown, microlearning was implemented as an online learning resource, in the form of video demonstrations. The in-class tests also had to be changed to online submissions, submitted via the Moodle virtual learning environment. Each technique was broken down into several short video demonstrations, each video focused on a single learning outcome and was usually around 7–10 minutes in duration, although some videos were longer, due to a summary demonstration akin to the live demonstrations. The online learning resource contained in-depth explanations and demonstrations, with links to real-world applications and examples that were beyond what was possible in the pre-lockdown format. Students could access the videos on demand, provided they had a suitable internet connection, and watch them as often as they wished. If they had difficulties understanding any aspects of the techniques, students could contact the tutor via email.

The Panopto learning analytics data indicates that videos which demonstrated more complex and challenging techniques received more unique views, by an average increase of 35%.

After introducing microlearning, the average student mark increased from 64% to 73%, compared with the previous year; 18% of students received a final mark of greater than 80%, which was an increase of 12% compared to the previous year. Through the end of semester student survey, learners reported being more satisfied with the class than ever before, giving an overall satisfaction rating of 94%, which was an increase of 10% when compared to the previous year. This highlighted that, regardless of the learning environment, teaching and learning can be delivered to a high quality, and in this case, it was largely due to introduction of microlearning to the class format. The following are some student comments on the class:

‘The course contents are covered in detail and enrich my understanding of sketch and rendering skills.’

‘Lot of explanation of the knowledge is on the Moodle.’

‘The online videos are great, I can re-watch them multiple times. Which makes it easier to understand.’

‘Prefer online demonstrations because I pay more attention to the detail and improve the quality of my sketches.’

‘Perfect module! Online teaching is great.’

Going forward, the online learning resource will be adopted as supplementary content in a flipped classroom manner and replace the lengthy live demonstrations during class time. It has been observed that this flipped classroom approach allows for new possibilities during the classes that were not previously feasible. For example, the implementation of the supplementary online learning resources will mean that students have a basic understanding of the technique at hand before it is formally introduced. This allows for a more in-depth introduction, with focused demonstrations and practical activities using real-world examples during class times, as discovered in this intervention. Additionally, it has been noted that this change allows students to practice the techniques under supervision and receive direct formative feedback, utilising the class time more

effectively. This intervention also fundamentally changes the dynamics of the class from a demonstrative and teacher-centric model to a more practical and student-centred learning model, as the in-class content can revolve around the students' needs, give more practical application of techniques (using real-world examples), and allow for more student-teacher interactions through formative feedback.

Case Study 2

The second course that adopted microlearning in emergency remote teaching was focused on the basics of the C++ programming language for 60 Year 2 undergraduate Engineering students. The course aimed to equip students with basic object-oriented programming knowledge. The microlearning portion of the instructional design was originally created before the COVID-19 lockdown to solve a learning problem in the computer laboratory classes related to the large number of students. Some found it difficult to follow the pace of a live demonstration of coding by the tutor in front, and others at the far end also experienced difficulties in viewing the demonstration. However, during the lockdown, all videos had to be further adapted to suit the remote learning environment. There were challenges for both tutors and students to meet online synchronously due to time zone differences and variable internet speed. It was, therefore, decided the short tutorial videos were then converted into an asynchronous virtual laboratory tutorial to help students to complete their programming assignments. The tutors then engaged with the students in smaller groups in the synchronous office hours, typically 10–15 minutes per group each week, to discuss their assignments. This was also a good opportunity to check their engagement in the course.

Here are some comments from those students:

‘Truly love the video recordings. I don't always understand the material the first time, but now I can review the highlights of a subject many times.’

‘...lab videos are just excellent to get started with new concepts.’

‘This module has a unique way of teaching which has eventually made C++ a fun learning subject and not a burden.’

There were challenges converting existing videos into a full online delivery. The original pre-lockdown videos varied between five to 24 minutes in length, while the microlearning generally recommends not more than 6–10 minutes. While it proved difficult to ensure that some more complex concepts fit into those boundaries, it was essential that those videos had a single learning outcome.

Data from the Panopto learning analytics tool shows that the 85% of correlation of the number of views corresponds to the total number length of the videos in minutes. Further investigation, including the observation of unique visitors, shows that almost 70% of the students watched the videos more than one time, particularly the videos running more than 15 minutes in length. In other words, the longer the length of the video the more repeated views.

Discussion and Implications

Being based around single learning outcomes, microlearning leads to more focused learning. By offering a high degree of flexibility, it puts students in control of their learning (Buchem & Hamelmann, 2010), which is instrumental in both traditional teaching and learning settings (Dent & Koenka, 2016) and online (Broadbent & Poon, 2015). Paired with the lack of direct teacher guidance and peer support, it has been observed that taking responsibility for engagement is key for the learner in the transition to emergency remote teaching, and this can be a pivotal factor in their academic success. Despite the lack of face-to-face instruction, Nouri (2016) found that flipped classroom model using short videos embedded on the virtual learning environment leads to ‘effective (...) and more active learning’ (p. 9). He also shows that this model can be more beneficial for ‘low achievers’ who struggle with traditional full-length lectures (p. 9).

Still, identifying students ‘at risk’ is more difficult in emergency remote learning. This is an area where analytics can be applied to track online engagement. This is important as even merely making these students aware of being ‘at risk’ can help increase their engagement (Summers et al., 2020). In turn, this can result in improved academic performance

(Agudo-Peregrina et al., 2014). The total time spent on virtual learning environments has also been shown to contribute to higher grades (Summers et al., 2020) and in particular related to solely online learning (Agudo-Peregrina et al., 2014). As undergraduate students often struggle with time management (Krygier, 2020), they may require stricter monitoring in the initial two weeks (Summers et al., 2020). From a practical standpoint, microlearning enables easier tracking thanks to the material based presented in micro chunks. Lack of engagement with a series of short videos is more apparent compared to missing one lecture in a long format.

Recommendations

Firstly, microlearning content should be embedded on the Virtual Learning Environment platform. It has been noted that familiarity and simplicity are key to ensuring user satisfaction. It also allows for seamless switching between videos and follow-up activities, both of which are tracked for evidence of student engagement. Further, creating a library of microlearning resources for standalone emergency remote teaching use is an important first step. Such collection over time can become a supplement to traditional face-to-face courses delivered in a flipped learning format. Finally, our experience shows that more training is needed for teachers and content creators. Microlearning videos need to fit specific criteria in terms of length, pace, and visual aspects to be more attractive to students. More research in this area is required to identify the specific needs of the Higher Education students.

These were the first attempts at microlearning at UNNC. There were some difficulties in designing longer videos as some more complex concepts required more detailed explanations or demonstrations. These microlearning videos, however, will be further adapted based on the current teaching and learning delivery mode. Our case studies show that microlearning can be effective on skills-based or practical programmes. Based on our reflections, however, we believe it can be successfully applied on other programmes, outside of STEM, and even more so on post-graduate programmes for more mature students.

References

- Agudo-Peregrina, A., Iglesias-Pradas, S., Conde-González, M., & Hernández-García, A. (2014). Can we predict success from log data in VLEs? Classification of interactions for learning analytics and their relation with performance in VLE-supported F2F and online learning. *Computers in Human Behaviour*, *31*, 542–550. <https://doi.org/10.1016/j.chb.2013.05.031>
- Beer, C., Jones, D., & Clark, K. (2009). The indicators project identifying effective learning: Adoption, activity, grades and external factors. *Proceedings Ascilite Auckland 2009*. <https://www.ascilite.org/conferences/auckland09/procs/beer.pdf>
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, *27*, 1–13. <https://doi.org/10.1016/j.iheduc.2015.04.007>
- Buchem, I., & Hamelmann, H. (2010). Microlearning: A strategy for ongoing professional development. *Elearning Papers*, *21*(7), 1–15.
- Dent, A. L., & Koenka, A. C. (2016). The relation between self-regulated learning and academic achievement across childhood and adolescence: A meta-analysis. *Educational Psychology Review*, *28*(3), 425–474. <https://doi.org/10.1007/s10648-015-9320-8>
- Dinkinson, J. (2020). Should students take the gamble? *Wonkhe*, 8th June. <https://wonkhe.com/blogs/should-students-take-the-gamble>
- Fawns, T., Jones, D., & Aitken, G. (2020). Challenging assumptions about ‘moving online’ in response to COVID-19, and some practical advice. *MedEdPublish*, *9*(1). <https://doi.org/10.15694/mep.2020.000083.1>
- Gasevic, D., Dawson, S., Rogers, T., & Gasevic, D. (2016). Learning analytics should not promote one size fits all: The effects of instructional conditions in predicting academic success. *The Internet and Higher Education*, *28*, 68–84. <https://doi.org/10.1016/j.iheduc.2015.10.002>
- Gill, A., Irwin, D., Towey, D., Walker, J., & Zhang, Y. (2020a, July). Reacting to the Coronavirus. In K. Tsang, C. Li, & P. Wang (Eds.), *Proceedings of international conference on open and innovative education 2020* (pp. 385–404). The Open University of Hong Kong.
- Gill, A., Irwin, D., Ng, R., Towey, D., Wang, T., & Zhang, Y. (2020b). *The future of teaching post-COVID-19: Microlearning in product design education*. IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE), 780–785. <https://doi.org/10.1109/TALE48869.2020.9368322>

- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EduCause Review*. [Online] Retrieved April 28, 2022, from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Krygier, D. (2020). Knowledge decay in higher education and possible solutions. In T. Byrom (Ed.), *Universal design: Meeting the teaching and learning challenges of 21st century higher education* (pp. 8–18). Cambridge Scholars Publishing.
- Maheshwari, G. (2021). Factors affecting students' intentions to undertake online learning: An empirical study in Vietnam. *Education and Information Technologies*, 26(2), 1–21. <https://doi.org/10.1007/s10639-021-10465-8>
- Markowitz, E. (2020). *Data shows college students struggling to stay motivated*. Fierce Education. <https://www.fierceeducation.com/best-practices/data-shows-college-students-struggling-to-stay-motivated>
- Muthuprasad, T., Aiswarya, S., Aditya, K., & Jha, G. (2021). Students' perception and preference for online education in India during COVID-19 pandemic. *Social Sciences & Humanities Open*, 3(1). <https://doi.org/10.1016/j.ssaho.2020.100101>
- National Bureau of Statistics of China. (2019). Family households by size and region 2018. <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>
- Nouri, J. (2016). The flipped classroom: For active, effective and increased learning—Especially for low achievers. *International Journal of Educational Technology in Higher Education*, 13(33). <https://doi.org/10.1186/s41239-016-0032-z>
- Panopto. (2021). *Panopto for education*. <https://www.panopto.com/panopto-for-education>
- Siemens, G. (2014). Supporting and promoting learning analytics research. *The Journal of Learning Analytics*, 1(1), 3–4. [Online] <https://files.eric.ed.gov/fulltext/EJ1127083.pdf>
- Summers, R., Higson, H., & Moores, E. (2020). Measures of engagement in the first three weeks of higher education predict subsequent activity and attainment in first year undergraduate students: A UK case study. *Assessment & Evaluation in Higher Education*. <https://doi.org/10.1080/02602938.2020.1822282>
- Todd, R. (2020). Teachers' perceptions of the shift from the classroom to online teaching. *International Journal of TESOL Studies*, 2(2), 4–16. <https://doi.org/10.46451/ijts.2020.09.02>



5

Embedding Mental Wellbeing in Lockdown: An Increased Priority during a Pandemic

Zoë Allman

Introduction

As the UK entered the first national lockdown due to the COVID-19 pandemic in March 2020, De Montfort University in Leicester (UK) was about to launch a university-wide approach to embedding mental wellbeing in the curriculum. Activity in the preceding six months including engagement with Advance HE, other Higher Education (HE) providers exploring this topic, and extensive stakeholder engagement across the university, ensured a project-led approach that would respond to the needs of students and staff. With the introduction of the lockdown, the instant move to online delivery for taught activity, meetings, and development opportunities, the planned approach required swift reconsideration to ensure fitness for purpose, not only for responding to what had been previously identified, but also in response to the unprecedented pandemic situation.

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Recognising the increased importance of the need to focus on and ensure mental wellbeing for students and staff (Student Minds, 2020), the University re-scoped its plans to enable activity to continue, making use of the online and blended approaches that would soon become part of everyday working practices. Five re-scoped core strands underpinned the activity to embed mental wellbeing in the curriculum. They are as follows:

1. Expansion of the University's student-facing online hub that supports health and wellbeing, to include more resources about mental wellbeing;
2. Development of new tutor resources to support academics in the blended-learning classroom to effectively embed mental wellbeing aligned to academic content and assessment requirements;
3. Enhancement of the staff training offer to include online sessions around professional boundaries and supporting students with mental health matters;
4. Expansion of the academic teacher training offer to include a greater focus on embedding mental wellbeing; and
5. Sharing best practice from across the academic community.

These core strands would develop online and blended approaches to support staff through creating new resources and support, extending and re-focusing existing offers to embed mental wellbeing approaches wherever possible.

Agility to Change the Plan

Prior to the pandemic, the planned approach for embedding mental wellbeing in the curriculum within the university had been to develop a bespoke training and development offer for students and staff and to assist students in recognising the embedded activity that supported mental wellbeing, encouraging all within the University community to 'thrive and succeed to their best potential' (Universities UK, 2020, p. 2). A research study would review environments for learning and how they

impact mental wellbeing, and a review of all aspects of the student journey would ensure a focus on enhancing mental wellbeing through better preparedness for, during, and beyond study.

The pandemic meant that previously perceived normalities, for example, on-campus training opportunities and using physical environments, had to be revisited. Similarly, methods for evaluation would require re-thinking, as meetings, focus groups and interviews would now take different formats. The senior academic and professional services project stakeholders instigated a re-scoping activity, noting the need to focus on embedding mental wellbeing whilst asking the key question ‘what can we do during a pandemic?’. The academic project leader worked with stakeholders to explore what could be offered that responded to previously identified needs whilst recognising that new methods and approaches were required due to the emerging pandemic situation.

An intense period of re-scoping in the first two months of the first national lockdown led to a renewed project proposal, one that would address the needs of the university, and the needs of the university during an unprecedented period of change and uncertainty. The five core strands were presented to senior stakeholders and the project board, gaining vital support to continue to drive embedding mental wellbeing activity.

Expanding the Student-facing Online Hub

In recent years De Montfort University has led a range of projects to support student health and wellbeing, increasing student awareness of and accessibility to support materials and activities, covering a range of wellbeing matters to encourage all students to stay well. The University hosts an online hub, HealthyDMU hub, acting as a single portal to a whole university approach to support student health and wellbeing (Hughes & Spanner, 2019), underpinned by an appreciation of the connection between health and wellbeing linked to positive academic engagement and success.

The HealthyDMU philosophy recognises mental wellbeing is relevant to all. It is informed by a social model of wellbeing, in which a student’s experience of mental wellbeing is directly related to their environment

and experiences, based on the five ways to wellbeing (Aked et al., 2008). This approach seeks to reduce wellbeing barriers to facilitate student success, establish pro-active approaches to mental wellbeing, and an environment that is health promoting.

The pandemic increased the focus of online delivery. Therefore, expansion of the online hub that supported health and wellbeing (Parkin & Brown, 2020) to focus on and include more resources about mental wellbeing was natural. Although not embedded in the curriculum or as a direct result of the pandemic, this online space would ensure mental wellbeing materials developed and enhanced in response to the pandemic were embedded at the centre of the University's wellbeing offer, accessible to students and staff, and signposted to from new and existing embedded material.

New Resources to Support Embedding Mental Wellbeing in the Virtual Classroom

Aligned to the student-facing HealthyDMU hub is the HealthyDMU Staff Toolkit, available for staff, providing additional detail and information to facilitate staff support for student health and wellbeing matters. Recognising where staff were already going for this information, it was identified as the place to locate new downloadable tutor resources to support academics in the blended learning environment as they endeavoured to effectively embed mental wellbeing aligned to academic content and assessment requirements.

The Toolkit's mental wellbeing pages would host a new suite of embedding mental wellbeing in the curriculum resources, particularly developed by the Course Specific Initiatives team within Student Welfare. Course Specific Initiatives had been previously introduced to embed support for students within taught sessions. Activities included workshops, talks, and resources for use within timetabled sessions, to support frequently occurring areas of concern relating to mental wellbeing support aligned to academic topics. Stand-alone activities, co-designed and co-delivered sessions, and supporting materials and resources covered topics

including resilience, healthy approaches to study, focus and attention, motivation, dealing with pressure, and managing stress.

Prior to the pandemic academic colleagues would reflect on their practice, identify a need that required a Course Specific Initiative, present the rationale, and the initiative would be developed to best suit the requirement. Whilst there was some co-delivery, the activities tended to be either stand-alone or co-designed, delivered in on-campus timetabled sessions by a member of the Student Welfare team. The activities were impactful and often scheduled again in subsequent cycles, however, there was increasing recognition that more could be done to empower academics to deliver the material themselves and further embed activities as and when required. This would make the curriculum more responsive to student needs, enabling embedding mental wellbeing content to be delivered at the perceived point-of-need, aligned to Carpe Diem principles identified by Salmon and Wright (2014). In response to the pandemic and anticipated growth in requests for Course Specific Initiative engagement, an alternative online offer was required, preferably one that would empower and enable more academic colleagues to deliver the material themselves at a time that best suited their curriculum plans.

The Course Specific Initiatives team reviewed frequently requested topics for content that could be adapted for online delivery via the creation of downloadable tutor resources. Each resource would consist of a short series of PowerPoint slides ready for use with students, accompanied by tutor notes to enhance the messaging on-screen. This meant resources were prepared and made available prior to requests, with academics accessing and using them as needed. The academic became the lead facilitator, making use of the resources in synchronous or asynchronous teaching. When used in taught settings the resources provided students with opportunities to learn some basic strategies to support mental wellbeing and receive signposting to the range of mental wellbeing support available across the University.

Each resource was designed to be used individually, embedded into academic activity where the topic was appropriate. The topics initially identified included '5 Ways to Wellbeing', 'Settling In', and 'Keeping Motivated', alongside some for a more specific audience but based on identified need, such as 'Preparing for Placements'. Engaging the

University's Teacher Fellow academic community in the development of these resources the community engaged in testing and feedback opportunities. This community of academic colleagues recognised for their ability to champion pedagogic innovation, reflect on practice, and support the development of others, provided invaluable feedback that assisted the development of the tutor resources prior to release for wider use. Located on the HealthyDMU Staff Toolkit, alongside examples of how the resources could be used, this new support was then communicated to the University community through various communications channels and events.

Evaluating this approach has indicated academics are feeling more empowered to deliver activities aimed to support and enhance mental wellbeing, allowing for flexibility and responsiveness to student needs, embedding mental wellbeing at appropriate times within the wider academic content; the pandemic acted as a catalyst for this development.

The Course Specific Initiatives team has identified that the development of the asynchronous downloadable resources developed in response to the pandemic has made it possible for the team to respond to last-minute requests from academic subject areas not yet addressed in existing resources. Prior to the pandemic, this would have been more difficult given the demands on the Welfare team as a whole during the academic session.

To ensure increased use of these resources as we transition back to greater campus-based activity, the project's academic leader is working with academic leaders from each of the faculties to ensure awareness-raising continues to occur to further embed these materials in 2021–2022 and beyond, as these resources will not just be beneficial during the pandemic but also beyond it. The University intends to retain the new asynchronous resource offer, as these resources have received positive engagement and feedback, the offer can be extended in response to need, and academics are empowered to use them as appropriate in taught activity, truly embedding mental wellbeing in the curriculum.

Enhancing Staff Training around Professional Boundaries and Mental Health Matters

Identified as an area for development prior to the pandemic was the need to develop a bespoke training and development offer to support staff to embed mental wellbeing, and assist students in recognising that activity. This area would remain a focus following the start of the lockdown, with an emphasis on creating a development offer that responded to identified priority needs. As such new online development workshops around ‘Professional Boundaries’ and ‘Supporting students with Mental Health’ were created as part of a whole university approach (Barden & Caleb, 2019). These would complement the existing ‘Healthy DMU Staff Toolkit’ exploratory workshop, and ‘Safe and Supported’ mandatory training that equips staff to recognise and report when a student might be at risk to themselves or others in the areas of mental health crisis, safeguarding, and/or radicalisation. The two new workshops were developed to ensure more staff were better placed to support student’s wellbeing when more care was required, and/or when a student had a mental health condition or disability. This need was recognised within the University and supported by a focus in the national media during the early part of lockdown, where there was an increasing emphasis on ensuring the maintenance of positive mental health and wellbeing.

The ‘Supporting students with Mental Health’ session was designed to explore common concerns and challenges relating to student mental health, consider the barriers students with mental health conditions experience in HE, explore legislation and non-discriminatory practices, including Disabled Students’ Allowance and reasonable adjustments, and facilitate the development of skills to support and signpost students who raise mental health matters. ‘Professional Boundaries’ was developed with academics to ensure it would cover requirements identified in one particular faculty where training in this area had been requested. Following successful piloting, it was evident that the topic would be beneficial for others, and invitations for future workshops were extended to the wider University community. This workshop aimed to support staff to identify and understand the professional boundaries when supporting students,

considering the legal frameworks and local policies that contribute to a University's duty of care to students. The workshop embeds mental wellbeing by demonstrating practical tools for setting and maintaining professional boundaries, enabling learners to embed mental wellbeing in their own practice and apply professional boundaries.

Academic and professional services colleagues have engaged with both of these new training offers. Within ten months, 70 colleagues had attended the 'Supporting students with Mental Health', and 106, the 'Professional Boundaries' workshop. Positive feedback has been consistently received, with responses to the question 'How confident do you feel supporting students with their mental health?' rising from 50% pre-session to 80% post-session. Learners recognise the effectiveness of delivery acknowledging the sessions as 'really smooth', enjoyable, and 'really interesting and useful'. The development team reacted swiftly to requests for access to asynchronous content after the workshops to act as reminders and prompts, creating additional bite-sized asynchronous content available for staff to access when needed.

A growing national focus on mental wellbeing around returning to a 'new normal', plus feedback from activity to date, has led to a further bespoke training workshop currently in development. This will be focused on the broader concepts of how to embed mental wellbeing in the curriculum. The content is being co-developed with academic colleagues and will pilot in summer 2021, ahead of the return to campus for the majority of taught activity for the 2021–2022 academic session.

Expanding Teacher Training for Greater Focus on Embedding Mental Wellbeing

Universal Design for Learning (UDL) is the foundation for learning approaches at De Montfort University; it aims to provide an equal learning experience for every student, ensuring individualised learning experiences, and personalised teaching and learning support (Meyer et al., 2014).

To ensure academic awareness of the role of learning environments in mental wellbeing, as underpinned by the HealthyDMU approach, and increasingly in recognition of the need to enhance mental wellbeing

support in light of the pandemic, underpinned by UDL approaches, the existing 'Effective Learning and Teaching' session for new academic staff was identified for development. Academic developers refreshed the training content to include more activities and opportunities for recognising opportunities in teaching and learning experiences that have an impact on mental wellbeing. The content was amended to ensure mental wellbeing was embedded, adding tasks and prompts around mental wellbeing to ensure all those engaging would actively consider and attempt embedding mental wellbeing in the curriculum. The provision itself embraced a new asynchronous online format to facilitate staff engagement throughout the pandemic.

The UDL offer has been directly enhanced to ensure greater focus on mental wellbeing by embedding concepts into the existing offer and through the introduction of new stand-alone development activities around the social, emotional, and compassionate community angles of UDL. Alongside this is the creation of a new asynchronous micro-learning resource focused on 'Emotionally Intelligent Teaching', inviting academics to consider the impact of their teaching on mental wellbeing through reflecting on emotional intelligence in personal practice. As Mortiboys (2012) identifies, 'as teachers we should develop and employ emotional intelligence to complement the subject expertise and pedagogical skills that we already offer to learners' (p. 3).

Whilst piloting new resources feedback from colleagues has indicated new and heightened awareness of concepts around the impact of teaching and learning experiences on mental wellbeing, particularly on an individual's emotions and how each individual may respond differently to each learning opportunity. Compassionate approaches have been discussed in various fora, with links to the development offered around professional boundaries.

Sharing Best Practice to Enhance Embedding Mental Wellbeing in the Curriculum

At De Montfort University the foundations for embedding mental wellbeing in the curriculum had been laid by previous projects including the introduction of UDL, Course Specific Initiatives, and

HealthyDMU. Recognising this positive starting point the final core strand of this re-scoped project would seek to identify and celebrate existing good practice, sharing learning with others to enhance embedding mental wellbeing across the University.

The academic project leader worked with academic and professional services colleagues to explore existing examples of mental wellbeing embedded in curriculum activity, and regularly reported findings through the project board. This facilitated networking opportunities, new introductions, and has led to the expansion of activity based on best practice from other disciplines. There have been opportunities for academic colleagues to be recognised for the pedagogic championing of embedding mental wellbeing with student wellbeing a key theme of the University's 'Academic Innovation Projects'. Colleagues have presented at the University's Teaching and Learning conference, and externally on the topic of embedding mental wellbeing. The academic project leader is also extending this impact, having recently established a national collaborative enhancement project funded by the Quality Assurance Agency focused on the methods and benefits of embedding mental wellbeing, drawing on good practice examples from within the University and other providers to further support development across the HE sector.

Regular Evaluations

Regular online surveys are being conducted amongst a pool of over 80 academic and professional services staff to track awareness of the increased focus on embedding mental wellbeing in the curriculum and preparedness for and embracing of the concept. To date, two-thirds of respondents have rated their ability to embed mental wellbeing in the curriculum as 'Excellent' or 'Good', the remaining third have indicated room for improvement, with some not having yet attempted it.

Following University-wide communications and events to highlight the range of support now available, confidence to embed mental wellbeing amongst stakeholders has increased from 33% to 75%; similarly, the awareness of the positive impact on mental wellbeing of embedding

mental wellbeing in the curriculum has increased by 14%. Developing awareness and understanding stakeholder reflections on the possibility of embedding mental wellbeing in the curriculum has increased from 33% to 100%. The project will continue to develop activity and increase awareness through the transition back to campus-based activity as lockdown restrictions ease.

Conclusion

In light of the pandemic, the University has adapted its plans for embedding mental wellbeing in the curriculum, recognising the need to continue with this vital work and therefore asking ‘what can we do during a pandemic?’. Academic and professional services colleagues have developed existing platforms, created new resources for use in the taught environment, provided new staff development opportunities, and raised awareness of this activity through regular engagement with a stakeholder group of over 80 colleagues, as well as the wider University community.

Learning from the experiences of re-scoping the project to ensure the most impactful activity during the pandemic we have learned:

- To use existing platforms that already engage students and staff, to ensure new activity is accessible and recognisable;
- That workshops and resources originally developed for specific audiences can be adapted to utilise common content for wider and swifter replication, increasing impact and reach;
- Online asynchronous offers allow for point-of-need delivery and quicker responses to new requests;
- Academics are increasing in their use of and confidence with embedding mental wellbeing materials, with ongoing regular communication about the support available being key to maintaining this progress as we return to more campus-based activity; and
- That the pandemic has acted as a catalyst for the development of existing resource and for greater focus on the need to embed mental wellbeing supported by a national media focus on this topic.

There were elements of the original project that were removed through re-scoping, but what has been achieved has been timely and impactful. The project has increased collaborative working between academic and professional services, which will continue as we plan for the return of more campus-based activity and as the focus remains on the need for embedding mental wellbeing, for the benefit of our whole university community.

References

- Aked, J., Marks, N., Cordon, C., & Thompson, S. (2008). *Five ways to wellbeing*. Resource document. New Economics Foundation. Retrieved from <https://neweconomics.org/uploads/files/five-ways-to-wellbeing-1.pdf>
- Barden, N., & Caleb, R. (Eds.). (2019). *Student mental health & wellbeing in higher education: A practical guide*. SAGE Publications Ltd.
- Hughes, G., & Spanner, L. (2019). *The University Mental Health Charter*. Resource document. Student Minds. Retrieved from https://www.studentminds.org.uk/uploads/3/7/8/4/3784584/191208_umhc_artwork.pdf
- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and Practice*. CAST Professional Publishing.
- Student Minds. (2020). *Planning for a sustainable future: The importance of university mental health in uncertain times*. Resource document. Student Minds: University Mental Health Charter. Retrieved from https://www.studentminds.org.uk/uploads/3/7/8/4/3784584/2005_planning_for_a_sustainable_future_a5.pdf
- Mortiboys, A. (2012). *Teaching with emotional intelligence: A step by step guide for higher and further education professionals* (2nd ed.). Routledge.
- Parkin, D., & Brown, G. (2020). *Creating socially distanced campuses and education project: Final capstone report*. Resource document. Advance HE. Retrieved from <https://documents.advance-he.ac.uk/download/file/9151>
- Salmon, G., & Wright, P. (2014). Transforming future teaching through ‘Carpe Diem’ learning design. *Education Sciences*, 4(1), 52–63.
- Universities UK. (2020). *Stepchange: Mentally healthy universities*. Resource document. Universities UK. Retrieved from <https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2020/uuk-stepchange-mhu.pdf>



6

Higher Education during COVID-19: First Response and Challenges in Tamil Nadu, India

Angeline Dharmaraj-Savicks

Introduction

The disruptive powers of the COVID-19 pandemic are endured disproportionately by different social groups in India as it is in other developing countries. Higher Education institutions made an immediate shift from traditional classrooms to digital platforms causing extraordinary learning inequalities for students across states, region, caste, class and gender (Gopinath & Ramachandran, 2020). This chapter focuses on highlighting the short and long-term challenges facing a Higher Education institution, serving fisherfolk communities, including resource management, the need for improved infrastructure and expertise to support the planned online learning models. The ability of the institution's leadership and stakeholders to change the mode of delivery while meeting policy mandates of student engagement, learning and skill development (Ministry of Human Resource Development, 2020) are examined.

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One of the fundamental principles that guides the New Education Policy is to ensure the ‘extensive use of technology in teaching and learning...and educational planning and management’ (Ministry of Human Resource Development, Government of India, 2020, p. 5). However, the preparedness, design and effectiveness of online and distance education where basic support systems such as availability and suitability of devices, bandwidth and student engagement besides the feasibility of undertaking practical-oriented courses are questionable. Critical theory (Murphy and Fleming, 2009) is used to examine the decisions of policy makers and the government in the midst of the COVID-19 crisis and consider how knowledge and discourses have been used in the year 2020–21 to direct further decisions that impact education. The chapter concludes by bringing attention to the immediate need for a coordinated response by policymakers, government officials and educators to develop co-constructed and workable solutions for teaching and learning that is accessible and inclusive to all students. Recommendations are made based on critical pedagogy, for policy makers and Higher Education institutions. Suggestions are made to reconsider existing policies and budgetary interventions to support disadvantaged students and disrupt educational inequity with: scholarships; improved technological access and infrastructure; reduced cost implications on institutions and stakeholders; and free and compulsory training for students and teachers.

Emergency Online Learning Initiatives in India during COVID-19

As a measure to contain the COVID-19 outbreak, universities and other educational institutions were directed to be closed from the 16th of March 2020 when the Government of India announced a countrywide lockdown. The Ministry of Education and the University Grants Commission issued guidelines on examinations, academic calendar, admissions and online teaching-learning to be adopted by universities (University Grants Commission, 2020). Several directives/ advisories/ guidelines were issued to universities and colleges, including the one to

impart online education by making the best use of e-resources that institutions have. Institutions were instructed to continue engaging students through online modes such as Google Classroom, Webex, YouTube, SWAYAM (www.swayam.gov.in) and Swayam Prabha (www.swayam-prabha.gov.in) that were broadcasted free via local television, National Digital Library (NDL) (<https://ndl.iitkgp.ac.in>), electronic journals and so on. The diverse Higher Education institutions in India differ in their geographical condition and infrastructural capacity that directly affect the challenges faced by them in implementing the teaching and learning directives during lockdown (Kraus, 2021). Higher Education institutions planned reopening their campuses at the end of the first lockdown in a phased manner. One of the directives that institutions had to put in place was to maintain the safety of staff and students through sanitisation, thermal screening, social distancing measures, and respiratory and hand hygiene (University Grants Commission, 2020). It is important to recognise the limitations of these governmental directives, one of which is the lack of budgetary support causing a number of small institutions to become cash-starved (Kundu & Sonawane, 2020). While certain countries were more successful in implementing distance learning, developing countries like India, due to its socio-economic and technological infrastructure, have struggled to ensure similar successes (Tasci, 2021).

Emergency Remote Learning (Hodges et al., 2020) is a temporary shift to an alternative mode of delivery for a period of time using limited resources. India, like many other countries, assumed the alternate method to largely be 'online teaching and learning' without giving due consideration to alternate methods/tools of distance education which would reduce the disproportionate impact online learning could have, specifically for those enrolled in Higher Education such as those who are disadvantaged and/or living in remote locations. A shift to online learning should be assisted with decisions that are sufficiently proactive to help the 37 million (Ministry of Human resource Development, 2019) Higher Education students successfully complete their academic year and present institutions with a roadmap for their future prospects. With online education, the effectiveness and quality of learning will significantly depend on the appropriate design of material, efficiency and level of digital access (OECD, 2020). When constraints faced by: academics in their

lack of technical skills, digital pedagogy and production of appropriate teaching material, specifically for practical learning-oriented lessons; students in their readiness, confidence and ability to access online material and capacity to engage in independent learning; and Higher Education institutions in their ability to provide resources to improve technological infrastructure and expertise of staff, the challenges faced move from short to long term (discussed later in the chapter) for all stakeholders involved (Muthuprasad et al., 2020; Bassett, 2020).

Critical pedagogy is steered by the goal to draw attention to practices that inculcate a democratic culture. For the purpose of this review, critical pedagogy will take an anti-oppressive social perspective for learners and teachers. The assumption is that the current collective response to the pandemic might exacerbate educational inequities (Buras, 2020, in Sullivan, 2021). The movement to online and distance education must therefore be carefully evaluated and reconsidered to mitigate inequities in policymaking and practice within institutions.

The Study

This research was conducted with participants from a Maritime Deemed University situated in the South East of India. Ethics application for the study was peer-reviewed and approved by the author's university's faculty ethics committee. The institution caters mainly to the middle and upper-middle-class social strata but also educates, through scholarships, a notable number of students from the marginalised fisherfolk communities.

Over 90% of fisherfolk do traditional fishing and approximately two-thirds live below the poverty line (Marine Fisheries Census, 2010) with literacy at 58% below the national average of 74%. Five student volunteers from the fisherfolk communities discussed the challenges they faced in accessing and engaging with online and distance education during lockdown. The geographical condition of the respondents is significant to understand the technical issues, access to learning aids, delivery methods and support from the HE institution (Naik, 2021). One student was in the first year of post-graduate studies, one in the final year of post-graduate studies, two in the first year, one in the second year of their

undergraduate studies which gave the researcher the benefit of understanding their experiences of engagement with different technical and non-technical subjects, placement, student support and so on. The data informed the impact of access and quality of online education on their future employment prospects. All students except two were working part-time to provide financial support to their families. Five members of the faculty, including the headteacher, were recruited and interviewed online.

Zoom video calls and WhatsApp voice calls were used depending on the quality of the internet and bandwidth the volunteers had access to. All students took the interview, conducted by the author, while at home in their respective fishing villages and were faced with interruptions to internet connectivity during the interview, and therefore interviews were completed via voice calls. All except one staff member had no interruptions as they chose to take the interview at the university campus.

The research was conducted at the cusp of the second wave of COVID-19 when the university was preparing to reopen. As a deemed university, the management has the authority and control over decisions regarding curriculum, examination, fees and certification. The study focused on understanding issues faced by both the management and the academics in the initial phase of transition to online teaching and support.

Adopting an interpretivist paradigm, the study is grounded by the data generated from the interactions with the participants. Real-life experiences of adapting, teaching and learning during the pandemic within their natural settings were investigated. Thus, multiple realities of the various participants have been recorded (Kivunja and Kuyini, 2017). A qualitative case study was undertaken in one Higher Education University to help understand the particularity and complexity of changes and adaptations that the circumstance demanded. The case study also enabled this research to gain a holistic perspective of the context (Stake, 1995). Semi-structured interviews were conducted via WhatsApp voice calls and zoom video calls. The interviews were transcribed, coded and themes derived for analysis and discussed. In order to protect the participants and the institution, all names used in this chapter are pseudonyms.

The study's aim was to understand practical struggles faced by the institution during the rapid response to the government mandate of

shifting to online teaching and learning during the COVID-19 pandemic. The research questions employed to develop this understanding are:

1. How do the challenges faced by the institution in supporting planned online learning models impact quality and access to students from fisherfolk communities?
2. How have the institution's leadership and stakeholders changed the mode of delivery to accommodate student engagement and future-proofing of education?
3. How have the government and other supporting organisations responded to the needs of institutions and students to ensure quality and continued education during the pandemic?

Findings and Discussion

The findings indicate that inequity in access to online learning and support are exacerbated by the oversimplified perception of the existing digital divide and digital poverty by academics and the university. The oversight of the institution to provide students individualised support was caused by their preoccupation with governmental, institutional and curriculum demands. This resulted in the institution's inattention to micro-level factors such as teachers and teaching mode, to ensure effective ways to deliver online education leaving those marginalised students with serious future consequences while disregarding their educational rights. One of the main purposes of this research is to highlight the challenges faced by the institution and students that contribute to further reinforcement of digital divide, equality and inequity, specifically for the students from the fishing communities, so that these can be addressed in terms of policies, strategies and practice.

Studies by Muthuprasad et al. (2021), Batra (2020), Ontong and Waghid (2020), Sullivan (2021) and OECD (2020) also reflect issues of digital divide and poverty of students and academics; the infrastructural and pedagogical preparedness of institutions and academics; and the oversight of inequalities and inequities faced by the marginalised. This research brings particular attention to the oversimplification of how

digital divide and poverty are understood by academics and the institution, and the short and long-term consequences on Higher Education students in marginalised communities. The data was analysed using thematic analysis which identifies patterns within the data that captured important considerations in relation to the research questions (Braun & Clarke, 2006). The four themes that stood out in the research are:

Infrastructural Limitations

According to the AIU-QASPIR survey report on the Preparedness of Indian Higher Education for Online Education, ‘infrastructure in terms of smart classrooms, devices, bandwidth and network, more than half of Government and Private universities are not equipped with basic digital devices. More than 65% of the institutions have less than 1GBPS bandwidth of which 22.4% face issues with narrow bandwidth. Automation of university systems with respect to admissions, examinations, administration etc are followed by 1/3rd of the universities. Faculty technical skills development for online teaching and learning has to be undertaken by 75% of the universities’ (AIU-QASPIR, 2021).

The respondents, particularly the headteacher explained how the institution identified the infrastructural gaps to effectively assist online teaching and learning and gradually made necessary arrangements to adapt.

We started with academics using whiteboards (physical boards) in their homes and teaching online via WhatsApp, google meet etc. We did not want to compromise on the delivery of course material. Later we bought CAMO software which is user friendly for both faculty and students.—Headteacher

On the other hand, academics expressed the challenges faced with the compatibility of digital tools that were needed to be used while teaching from home.

...not only students but I also did not have the cash to buy a good quality laptop but I could pay for a PC. Still, some of the teaching like statistics and mathematics, we can only do in the campus because laptop and PC are not useful to teach these subjects.—Manoj, academic

All the students who were interviewed, except two, had to buy new smartphones since they did not have computers or other digital devices. None of the students had access to the internet that was unlimited. They used a data card.

I have to pay for internet. My cell phone had repair. No laptop. Nearly one month I did not attend class. After that I bought a phone and data card and attend class but still many times, current (electricity) goes off and it is difficult.—Sarvesh, PG student

It is not just the availability of infrastructure that is an issue. Mobile phones, used by several students are insufficient as a digital tool to effectively engage in Higher Education unless all applications and software are compatible and work on the device (Dhawan, 2020). The layer of consideration that has to be made on top of this is the infrastructure around the geographical location and the footprint of connectivity that is available. The central and regional governments have paid no attention in addressing this challenge.

Preparedness for Online Teaching and Learning

Preparing academics to meet the challenges of shifting to online teaching was seen as one of the first responses of the institution. Training was organised to develop pedagogical knowledge and software familiarity to enhance the confidence of the faculty in their experience of teaching online (Horvitz et al., 2015).

By the second week we were given training to teach via online forums from IT group in university. Later we had four training sessions from the software providers which was useful. When we encounter problems while teaching, we can get in touch with CAMO support group.—Vikram, academic

Although this is a good and essential first response, it is also important to ensure academics are trained by pedagogical experts besides the IT and software support group. The ability of the faculty to adopt and be flexible

to suit the changing conditions of student needs and limitations cannot be achieved without expert training (Walsh et al., 2021). The impact of non-expert training was evident from student responses such as *'it was difficult to concentrate'* (Nirmal, student) *'...hard to clarify doubts during lectures'* (Rohith, student), *'technical subjects (bio statistics) was not taught because it is difficult to understand online'* (Sarvesh, student). Evidence also suggested that there was more support made available for the faculty to adopt to online teaching whereas students were not offered similar training or support to adopt to online learning. This was evidenced by the comment of an academic who stated, 'students don't even use any simple online tools like whiteboard. They find it difficult to access material from online' (Durai, academic). Poor preparedness of digital learning competencies will lead to poor academic-type competencies (OECD, 2020). A combination of poor pedagogical practices of academics and poor preparedness of digital competencies in students will have long-term consequences for knowledge, skill and employability. Students need a two-way interactive, dynamic and humanised learning process that they can comfortably adapt to. Curriculum content should also focus on relevant and practical elements that hone their skills (Dhawan, 2020). At the moment, the delivery is still teacher-centred and pedagogically unevolved, arguably also due to policy and practical constraints.

Need for Directed Student Support

Amongst the chaos of COVID-19 and online teaching, institutions must begin to change the focus of their attention to enhance the quality of online teaching and learning in order to ensure all students reach their full potential in the learning process (Song et al., 2004).

I sometimes cannot get my course material. Many times, my mobile not working. Some friends give me lecture notes and I study from that.—
Nirmal (student)

University gave me attendance and let me write my exam when I could not attend for one month. Sir called and spoke and he sent to me PPT and notes.—Sarvesh (student)

It is evident that the faculty and university have extended support to students who came to their attention due to non-engagement. They are directed to conventional platforms to engage with their course. Nevertheless, technical courses do not evidence quality learning as their delivery has not integrated the significant practical component of the course. The efforts of the university can take a critical pedagogical lens and extend to developing a pedagogical support system for its academics. This would encourage and enable planning and delivering sessions that incite quality participation from students in fishing and other marginalised communities/remote locations (Devkota, 2021). The absence of such efforts will further marginalise and disengage students from learning during and post COVID-19.

Non-concerted Efforts of Government, Policy Makers and University to Ensure Equity in Online Education

The new Education Policy states a shift to digital education in the next 10–15 years (Government of India, 2020) but this shift was forced to happen overnight by the pandemic. Online teaching is no more an option but a necessity. Policies for Higher Education by the government and education institutions continue to fortify neoliberal ideologies of market, performance and competition (Mathur, 2018). Responses such as ‘In our university, they are particular about delivery of the course material as per the syllabus. It is necessary and we are doing that. So far as our students are concerned, it is only about the course planning and delivery’ (Prabhakar, academic), ‘Government promised 1.5GB for all students but nothing was done. It was only for election votes. I have to pay a lot of money for internet to study’ (Rohith, student) highlight the concentration on neoliberal ideologies that drive institutions. The Institution is driven by Governmental policy decisions. While Higher Education seeks

to develop skills and potential for students, issues addressed in this chapter indicate equity and social justice are far from being fulfilled.

We need policy changes in the local and regional levels. There should be some priority for students in the final year—placement drives, training and networking. It is our duty to prepare students for successful employment.—Headteacher

The headteacher's comment underscores the constraints in the governmental structure and the lack of concerted efforts from other governmental departments and organisations to ensure a holistic approach in addressing issues of online teaching and learning. Digital infrastructure, provision of digital tools for students, ensuring continued professional digital and pedagogical training for Higher Education faculty are essential to eliminate existing inequalities caused by class, caste, gender and regionality.

Implications in the Post-COVID-19 World

The issues that this research has highlighted are complex considering the need for concerted efforts of various stakeholders, large budgets and development (infrastructure, technology). There is a desperate need for educators and the government to protect both, educational rights and the future of these students. Questioning the sustainability of Higher Education for those in remote and marginalised communities and the increasing social inequalities by policy makers is crucial to shape effective Higher Education post COVID-19. The feasibility to implement the needed changes requires careful planning and time but, in the short run, will unfortunately face the widening attainment gap between the privileged and unprivileged/those in remote locations.

Reimagining the curriculum to embed learning tasks based on real-life contexts can encourage meaningful and effective education besides being a response to inequality and injustice brought to light through the current curriculum (Batra, 2020). Ensuring value-added services such as training for job skills, internships and projects alongside online or

blended learning would increase the confidence of students in the new mode of learning. Education must be developed to transcend beyond boundaries. This process has begun via the University Grants Commission and the Ministry of Human Resource Development in their digital initiatives but these must expand to include specialist subjects such as marine sciences, be simplified for easy understanding and available in regional languages. A significant reduction in cost of Higher Education is a consideration policy makers and institutions must make to include those in remote and marginalised communities as blended learning takes a leading role post COVID alongside the introduction of the New Education Policy. Neglect of cost reduction of fees can also lead to student debt crisis (Jena, 2020) in the near future if the employment market does not pick up.

Government supporting students with free internet and digital tools that are compatible with the course requirements, specifically for those in marginalised and remote locations, can be argued as a basic necessity to address the issue of inequity that is currently being reinforced. This research was unable to cover a gender perspective which will add a significant contribution to policy development, however further research including this perspective will be undertaken.

Conclusion

The research emphasises the gaps in online teaching and learning from the perspective of various stakeholders and reinstates the need for committed and concerted efforts from policy makers, governments (central and regional) and Higher Education institutions to reach the goal of equitable education for all students. The pandemic has given Higher Education Institutions the opportunity to reimagine their pedagogical approaches and move away from their heavy reliance on traditional methods of teaching and learning. Uncertainties of the course of the pandemic and the introduction of the New Education Policy, Higher Education institutions need to consider running programmes using blended and virtual teaching methods in the long term to support equitable Higher Education. Intensive research on digitalisation of education for students

in marginal communities and the resultant challenges can inform the implementation strategies for the New Education Policy. A comprehensive national policy on online and blended education is imperative for educators to plan and deliver education with a long-term vision.

References

- AIU-QASPIR. (2021, June 17). *Release of survey report on 'Preparedness of Indian Higher Education for Online Education'*. TenNews. <https://youtu.be/NzurCyluZJ0>
- Bassett, R. M. (2020). Sustaining the values of tertiary education during the Covid-19 Crisis. *International Higher Education*, 102, 5–7.
- Batra, P. (2020). Re-imagining curriculum in India: Charting a path beyond the pandemic. *Prospects*. <https://doi.org/10.1007/s11125-020-09518-6>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- CMFRI, K. (2012). *Marine Fisheries Census 2010 Part II*. 4 Tamil Nadu.
- Devkota, K. R. (2021). Inequalities reinforced through online and distance education in the age of COVID-19: The case of higher education in Nepal. *International Review of Education*, 67, 145–165.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*. <https://doi.org/10.1177/0047239520934018>
- Gopinath, C., & Ramachandran, K. (2020). Comment | Higher Education post-COVID-19. *The Hindu*. <https://www.thehindu.com/education/comment-higher-education-post-covid-19/article31341564.ece>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Horvitz, B. S., Beach, A. L., Anderson, M. L., & Xia, J. (2015). Examination of faculty self-efficacy related to online teaching. *Innovative Higher Education*, 40(4), 305–316.
- Jena, P. K. (2020). Impact of COVID-19 in higher education in India. *International Journal of Advanced Education and Research*, 5(3), 77–81.

- Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of higher education*, 6(5), 26–41.
- Kraus, R. (2021, April 26). The ‘Digital Divide’ and COVID-19’s impact on internet access, Mashable. <https://youtu.be/xkbZPAJF88k>
- Kundu, P., & Sonawane, S. (2020). Impact of COVID-19 on School Education in India: What are the Budgetary Implications. *A Policy Brief. Centre for Budget and Governance Accountability (CBGA) and Child Rights and You (CRY)*. Available online at: <https://www.cbgaindia.org/wp-content/uploads/2020/09/Impact-of-COVID-19-on-School-Education-in-India.pdf>
- Mathur, N. (2018). The low politics of higher education: Saffron branded neo-liberalism and the assault on Indian universities. *Critical Policy Studies*, 12(1), 121–125. <https://doi.org/10.1080/19460171.2017.1403343>
- Ministry of Human Resource Development. (2019). All India survey on higher education.
- Ministry of Human Resource Development, Government of India. (2020). *About new education policy consultation*. <https://www.education.gov.in/en/nep-new>
- Murphy, M., & Fleming, T. (Eds.). (2009). *Habermas, critical theory and education*. Routledge.
- Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Girish, K. J. (2021). Students’ perception and preference for online education in India during COVID-19 pandemic. *Social Sciences & Humanities Open*, 3(1) <https://doi.org/10.1016/j.ssaho.2020.100101>
- Naik, G. L. (2021). Online teaching and learning of higher education in India during COVID-19 emergency lockdown. *Pedagogical Research*, 1(6).
- OECD. (2020, September 24). *Strengthening online learning when schools are closed: The role of families and teachers in supporting students during the COVID-19 crisis*. OECD.org: <https://www.oecd.org/coronavirus/policy-responses/strengthening-online-learning-when-schools-are-closed-the-role-of-families-and-teachers-in-supporting-students-during-the-covid-19-crisis-c4ecba6c/>
- Ontong, K., & Waghid, Z. (2020). *Towards Cultivating a Critical Pedagogy of ‘Splace’: A Response to Teaching Practices in Higher Education amidst COVID-19*. Re-thinking the humanities curriculum in the time of COVID-19, 56–73.

- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education*, 7(1), 59–70.
- Stake, R. (1995). *The art of case study research*. Sage Publications, Inc.
- Sullivan, F. R. (2021). Critical pedagogy and teacher professional development for online and blended learning: the equity imperative in the shift to digital. *Educational Technology Research and Development*, 69(1), 21–24.
- Tasci, G. (2021). The impact of COVID-19 on higher education: Rethinking internationalisation behind the iceberg. *International Journal of Curriculum and Instruction*, 13(1), 522–536.
- University Grants Commission. (2020, November). *UGC guidelines for re-opening the universities and colleges post lockdown due to COVID-19 pandemic*. Retrieved from University Grants Commission, New Delhi, India: <https://www.ugc.ac.in/>
- Walsh, L. L., Arango-Caro, S., Wester, E. R., & Callis-Duehl, K. (2021). Training faculty as an institutional response to COVID-19 emergency remote teaching supported by data CBE. *Life Sciences Education*, 2021(20), 3.



7

Modelling Learner Engagement through Zoom: Using Situated Learning to Develop Educator Capabilities in Synchronous Online Teaching

Sarah Dart and Lauren Woodlands

Introduction

Significant technological advancements over the last decade have created novel opportunities for the design and delivery of online learning. Further propelled by accessibility, convenience, and economic benefits, this has contributed to dramatic growth in online education within the tertiary sector (Kebritchi et al., 2017). However, teaching online requires different skills for educators than in face-to-face environments (Ní Shé et al., 2019), and there is a tendency for novice online educators to be driven by the technology rather than the pedagogy that underpins impact in practice (Cowling & Birt, 2018; Kebritchi et al., 2017). Moreover, gaining an understanding of a technology's capabilities is a very different prospect from actually implementing this technology within an effective learning

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design (Herrington et al., 2015). Consequently, professional development plays a key role in adjusting educators' mindsets and developing pedagogical in addition to technological skills for facilitating learning (Kilgour et al., 2019).

The challenges associated with transitioning teaching from face-to-face to online environments were brought into sharp focus during the recent COVID-19 public health crisis. Many universities made the decision to rapidly move fully online which created an urgent need to develop educator capabilities in online learning and teaching practice. This case study discusses the design and delivery of a professional development workshop used to upskill educators in using the Zoom web-conferencing platform for synchronous online teaching at the Queensland University of Technology, a large Australian university that has historically focused on face-to-face delivery. The case study draws on survey data contributed by workshop participants to evaluate the success of the sessions through the lens of situated learning theory. It subsequently makes recommendations for how synchronous online teaching development should be provisioned in the future.

Background

In online education, learning can be classified as either asynchronous, where students are engaged at a time and location of their choice, or synchronous, where students interact with others in real-time (Jones, 2016). Examples of asynchronous learning activities include discussion boards, videos, and quizzes (Watts, 2016). Synchronous online learning typically takes place through a web-conferencing platform such as Zoom, Blackboard Collaborate Ultra, WebEx, or Microsoft Teams (Jones, 2016), where students are guided through activities by an educator who facilitates the session. While asynchronous learning offers convenience and flexibility, synchronous modes are better suited to building a sense of community, facilitating immediate feedback (Watts, 2016), and motivating students to keep on track with their studies (Jones, 2016). The social learning opportunities in synchronous environments also stimulate critical reflection and promote higher-order thinking (Moore & Pearson, 2017). Unsurprisingly then, there is evidence synchronous learning

opportunities contribute to improved learning outcomes, and by extension, course completion rates (Jones, 2016).

Given the fundamental reliance on technology, educators teaching online require greater technological proficiency than in face-to-face contexts (Gillett-Swan, 2017). However, the challenges educators encounter moving online run much deeper than technological skill gaps (Gregory & Salmon, 2013) as they are required to confront new concepts that challenge their habits, understandings, and experiences of teaching (Gregory & Salmon, 2013; Kilgour et al., 2019). For example, the role of the educator shifts when teaching online to more greatly emphasise knowledge facilitation rather than knowledge expertise (Ní Shé et al., 2019). Consequently, it is critical for educators to evolve towards student-centred approaches (Kebritchi et al., 2017). Similarly, content cannot be directly translated to the online context as communication constraints, misaligned learner expectations (Kebritchi et al., 2017), student anxiety around using technology, and learner isolation (Gillett-Swan, 2017) present as key issues. Understanding and addressing these difficulties is further compounded by most educators not having experience as an online student to draw upon (Gregory & Salmon, 2013). Novice online educators can also get caught up in the technologies used to deliver online courses, and subsequently neglect the pedagogy (Cowling & Birt, 2018). This risks distracting students, negatively impacting engagement and ultimately learning outcomes (Kebritchi et al., 2017).

Teaching in tertiary institutions is unique in that education qualifications are not required. Consequently, professional development plays a vital role in building learning and teaching capabilities (Cho & Rathbun, 2013). While formalised and structured professional development is known to enhance skills, educators can struggle to put concepts into practice as the reality of teaching does not easily fit within theoretical models (Norton et al., 2010). This can be overcome with development framed around the actual problems of practice, which provides educators with opportunities to situate learnings within their own teaching experiences (De Rijdt et al., 2013).

Situated learning can be defined as ‘the notion of learning knowledge and skills in contexts that reflect the way the knowledge will be useful in real life’ (Collins, 1988, p. 2). It argues learning is a function of context,

and thus social, historical, cultural, and political forces influence the learning experience. This departs from the traditional perspective that knowledge is just a body of facts and broadens the focus of learning to consider more than just cognitive processes (Lave & Wenger, 1991). Benefits of developing knowledge in a representative environment include learners being better at identifying connections between the knowledge and how it can be applied in novel situations, and learners being more likely to perceive the knowledge as relevant as the use cases are far more apparent (Collins, 1988). According to Herrington et al. (2010), characteristics of situated learning environments are authentic context, authentic activities, access to expert performances and the modelling of processes, multiple roles and perspectives, collaborative construction of knowledge, reflection, articulation, coaching and scaffolding, and authentic assessment.

While there are large bodies of research addressing approaches to online teaching and educator professional development, there are few studies examining how to upskill educators in synchronous online teaching. This is especially given the speed with which web-conferencing technologies have moved that has led to significant advances in the tools available and associated possibilities. This case study subsequently contributes to the body of knowledge by reporting on a professional development workshop for developing educator capabilities in synchronous online teaching with Zoom. The success of the approach is evaluated in light of situated learning theory.

Research Design

Contextual Background

The Queensland University of Technology is a research and teaching-intensive university located in metropolitan Brisbane, Australia. The university enrolls approximately 50,000 students in both undergraduate and postgraduate courses across a range of discipline areas including business, law, science, engineering, creative industries, education, and health. The

vast majority of the university's courses are taught over a semester comprising 13 teaching weeks followed by an exam period. Learning is predominantly delivered through on-campus experiences (such as lectures, tutorials, and practical sessions), with the learning management system used to support this (such as through video recordings and online quizzes). Teaching is delivered by staff employed in a range of roles. Lectures are typically run by full-time academics with both research and teaching responsibilities, while the majority of tutorial and practical workshop facilitation is undertaken by casual teaching academics. This is consistent with the wider higher education context within Australia and other parts of the world (Ní Shé et al., 2019). The university also employs a comparatively small number of educators in professional roles to fulfil learning support needs through one-to-one and small group consultations.

As a result of the COVID-19 pandemic, the decision was made to shift teaching online from the end of March 2020. This meant the first four weeks of Semester 1 were delivered as normal, with the remainder of the semester going fully online. Consequently, many educators without experience in online teaching were faced with rapidly transitioning learning to an online environment as well as upskilling in a new form of delivery.

Professional Development Workshops

Over 40 one-off workshops entitled 'Introduction to Educating on Zoom' were delivered to upskill educators in using Zoom to teach online. These workshops were scheduled for 45 minutes and were facilitated by academics in the learning and teaching development team. In early sessions when attendance numbers were high, two staff members were scheduled to deliver each session (one to lead and the other to support through managing questions in the chat). When attendance per session decreased after the first few weeks, only a single facilitator was used. An average of 15 participants were estimated to attend each session.

Workshop content focused on two key aspects of facilitation—establishing the learning environment and fostering active learning. Establishing the learning environment comprised the use of a welcome

screen, establishing ground rules, socialising the group, orientating students to Zoom features, providing clear instructions, segmenting sessions, and using a variety of strategies to engage and support diverse learners. The second aspect of active learning facilitation covered using Zoom features (non-verbal feedback icons, multiple-choice question polls, screen-sharing and annotations, raise hand, chat, and breakout rooms) to engage students through polling activities, whole class discussions, and small group tasks.

Drawing on the core principles of situated learning (Collins, 1988; Herrington et al., 2010; Lave & Wenger, 1991), the workshops were run within Zoom to provide an authentic context. The workshops were also designed to give educators the perspective of their learners before exploring the teaching angle. This meant facilitators explicitly modelled approaches to conducting sessions and actively involved educators as participants. Encouraging active engagement was core to the session's design given active learning strategies are known to produce enhanced outcomes (Freeman et al., 2014), and modelling this best practice served to encourage educators to adopt and emulate the delivery style. Examples of how this was implemented included getting educators to vote in a poll on their current confidence level using Zoom, answer questions posed verbally by the facilitator about whether they were on-campus and what feature of Zoom they were most interested in (through the yes/no vote and typing in the chat respectively) and engage in a breakout room discussion where they could experiment with Zoom features with their peers. Throughout the session, the pedagogical purpose of actions was explained by the facilitator (with reference to the scholarly literature underpinning the pedagogy) and educators were encouraged to reflect on their experiences. Moreover, after experiencing Zoom features as a participant, screenshots of the facilitator's perspective were provided in conjunction with further points to consider when incorporating into teaching. Towards the end of the workshop, tip sheets addressing frequently asked questions, the slides, and a recording of the session filmed from the facilitator's perspective were shared. The latter was produced to support educators in developing the skills to host sessions after the workshop—educators were encouraged to create their own Zoom meeting and join with a second device to build familiarity and confidence with

the host interface. Finally, participants had the opportunity to ask questions and have these answered by the session facilitator.

Evaluation Procedure

An online anonymous survey was used as the primary data collection tool. The survey was disseminated in July 2020 (at the conclusion of the teaching semester) to those who had booked into one of the professional development workshops between March and May 2020. The survey was estimated to take approximately 10 minutes to complete and consisted of both open and closed-ended questions focused on educators' experiences of the session and how they had used Zoom in their practice since. This case study focuses only on the former data set. In total 104 responses were received to the survey out of an estimated 600 attendances. The demographic breakdown of respondents is given in Table 7.1.

Thematic analysis was applied to textual comments where participants discussed the most beneficial aspects and the aspects most needing improvement from the workshop to uncover patterns within the data. A deductive approach was used to drive this process (Braun & Clarke, 2006), with comments coded according to their alignment with the characteristics of situated learning environments set out by Herrington et al.

Table 7.1 Demographic characteristics of survey respondents

Demographic characteristic		Survey respondents (%)
Gender	Female	77
	Male	19
	Gender diverse	4
Role	Lecturer/unit coordinator	36
	Learning and teaching professional	10
	Tutor	19
	Other	35
Faculty	Creative industries	10
	Education	12
	Health	22
	Law	5
	Business	9
	Science and engineering	7
	Other (includes centralised departments)	35

(2010). The two researchers engaged in this coding process together and debated the alignment of the comments until a consensus was reached for each case. The most significant findings emerging from this process are reported.

Results and Discussion

The survey showed that overall participants were satisfied with the workshop. Participants were asked to rate how influential the workshop was on their subsequent approach to teaching via Zoom on a 1 to 7 scale, where 1 represented no influence while 7 represented highly influential. Here 77% responded between 5 and 7, the upper end of the scale. This favourable response was also consistent with the open-ended comments where participants justified their numerical ratings. Those who gave responses on the lower end of the scale often referenced that they already had the introductory skills taught in the workshop.

Outcomes of the thematic analysis are presented below. This concentrates on the situated learning characteristics of authenticity of the environment, authentic activities, access to expert performances and modelling of processes, multiple roles and perspectives, articulation, coaching and scaffolding, and collaborative construction of knowledge.

Authenticity of the Environment

The professional development workshops were run online within the Zoom platform. This represents a highly authentic learning environment, given it is representative of the context where educators would be applying their learnings in real life. This authenticity was perceived positively by workshop participants who highlighted that ‘living the experience’, ‘experiential learning’, and ‘immersive demonstration’ were useful in developing their teaching practice as they enabled participants to see clear connections between concepts and how these could be implemented within their own teaching. This enhanced capacity to perceive uses for

taught material is an advantage of situated learning that has previously been highlighted in the literature (Collins, 1988).

Authentic Activities

Activities incorporated into the professional development workshops were designed to authentically engage participants. Thus, rather than just discussing a Zoom feature's capabilities, educators were asked to interact with Zoom features within representative learning tasks. This is known to support real-world knowledge transfer (Herrington et al., 2010). Although most participants saw the activities as authentic to their contexts, there was evidence staff undertaking professional roles did not view activities as relevant to them: 'the session I attended was mostly related to academic staff and not necessarily professional staff'. Catering to the wide diversity in learning and teaching roles at the university was identified as a challenge in the design of the workshops. While the workshop tried to draw upon a range of educational situations, less attention was paid to conducting student consultations, which is core to many learning and teaching professional roles.

Access to Expert Performances and Modelling of the Processes

The presenters' demonstration quality was frequently praised as a beneficial aspect of the workshops:

I think the best aspects were the clear instructions and practical demonstration that I got to experience in the session. It really demonstrated the best practice approaches to using Zoom and gave me new strategies for my own work.

[I liked the] demonstration of different functionalities—you can see how it works and it makes you feel more confident using it in your own sessions.

Participants perceiving the workshop facilitators as experts was key to this outcome, as has been noted elsewhere in the literature (Little & Green, 2021). Expert performances enable learners to observe and recognise appropriate strategies for completing a task, before attempting it themselves (Herrington et al., 2010). This can be further enhanced with the expert's explicit communication of thinking processes, which can highlight why a certain approach is being employed while tackling common misconceptions (Dart et al., 2020). Participants complimented this explicit communication of the rationale in the workshops with comments like: '[The best aspect was] the way the link between the technology, the pedagogy and my learning was so clear. It was very "meta"!!' Additionally, the presentation of pedagogical knowledge alongside technological knowledge addresses a common issue around professional development programmes only covering teaching theories and consequently alienating educators who want practical guides (Gregory & Salmon, 2013). However, there was some evidence of frustration with the pedagogical explanations from a few participants who just wanted 'tip sheets' to quickly understand Zoom's capabilities.

Multiple Roles and Perspectives

Educators engaged in the workshop as participants but were encouraged to develop hosting skills afterwards with the support resources provided. Overall, initially experiencing Zoom from the students' perspective was viewed positively—participants reported the workshop's best aspects as 'being able to see what it looks like from the participant perspective' and 'experiencing learning from the students' perspective to know when/how to give effective instructions for students'. However, some participants expressed discomfort around being the learner, while others wanted to skip the step of being a learner and progress straight to hosting. It was noted that 'having access to the recording [from the host's perspective] after the session was crucial' in building hosting capability within Zoom. However, several participants wanted greater exposure and experience with the facilitator's perspective during the workshop: 'The session didn't let you experience setting up your own Breakout rooms, because

ironically you're a participant in a session learning how to be a facilitator. I would ensure participants get to take turns being 'host' to practise this'.

Articulation

A strength of the workshop was the incorporation of active learning opportunities—as one participant commented 'not just being told, but shown what to do (and doing it yourself)'. This was further evidenced by responses to the best aspect of the workshop being 'when I had to engage/participate', 'learning the tools and having the chance to try them out', and 'having a go' at the features. Situated learning argues for learning through practice, as this can surface cognitive conflict when the learner works through the problems they encounter, which in turn leads to deep learning (Herrington et al., 2010). However, it was clear that participants would have appreciated further articulation opportunities during the workshop: '[I would have liked] more practice as when I got to do my first class, I was fumbling around a fair bit'. Related to the findings of the previous section, participants wanted facilitation experience: 'If all the functions available to host can be practised and used by the attendee will be good learning [sic]'. Nevertheless, the video recording of the session conducted from the host's perspective was noted as being useful in filling this gap. Building on this, one participant recommended 'some pre-recorded short sessions of demo for participants to access at their own time' to support additional learning.

Coaching and Scaffolding

The level and pace of the session were viewed favourably by most participants. Moreover, the chance for participants to ask questions and receive individual advice was noted as beneficial: '[I liked that] we could ask a lot of questions and discuss approaches to using Zoom with the facilitator'. However, numerous participants recommended tailoring sessions to individuals' needs, such as:

Perhaps the sessions could have been split into different levels of experience. I know that there were some people in the session who had never used Zoom as a facilitator previously so they may have been more appreciative of time spent on more basic features, whereas I was already familiar with Zoom and therefore appreciated the more detailed complex features that I hadn't used previously.

Tailoring of content to various discipline areas or role types was also raised as a possible improvement avenue. Similarly, several participants suggested providing a follow-up session as a way of scaffolding learning towards more advanced topics, such as 'what to do when things go wrong'.

Collaborative Construction of Knowledge

Related to the coaching theme above, some participants commended the opportunity to discuss their online teaching challenges within the session and receive feedback. Some participants also appreciated being able to hear their peers' questions and participate in the ensuing discussion. A small number of participants suggested taking this collaborative approach further by recommending 'ongoing dialogue and building a community of practitioners would be useful', and, 'a follow-up forum where people can share how they use Zoom, activities and pedagogy'. This points to participants wanting to engage in a community of practice to continue their development in online teaching. There is evidence in the literature that this can consolidate key learnings of short professional development interventions and reinforce best practice (Chalmers & Keown, 2006).

Conclusions and Recommendations

This case study has reported on the outcomes of a short professional development workshop designed to upskill educators in using the Zoom web-conferencing platform for synchronous online teaching. Outcomes were evaluated through the lens of situated learning theory.

Table 7.2 Key findings and recommendations for delivering short professional development workshops on synchronous online teaching

Findings	Recommendations
An authentic environment is viewed favourably.	Professional development in synchronous online teaching should be conducted within the platform.
Expert modelling supports the translation of concepts into practice.	Authenticity is essential in the credentials of the facilitator.
Although most participants appreciated the student perspective, participants desired similar depth for the facilitator perspective.	Provide opportunities for participants to take on both participant and host roles, or provide follow-up resources to support this outside of the session.
Actively engaging participants in authentic activities is effective.	Include a range of authentic tasks that actively engage participants in the tools.
Participants value opportunities to receive personalised advice and content tailored to their discipline area and level of expertise.	Allow opportunities for open discussion and consider running sessions targeted at specific cohorts.
Participants want to connect with and learn from colleagues to further their practice in online teaching.	Develop a community of practice to facilitate the sharing of experiences.

While the sessions were reviewed positively overall by participants, there were several aspects that could be enhanced. Key findings and recommendations arising from the analysis are summarised in Table 7.2. Future provisions of professional development in online teaching should seek to capitalise on these recommendations to implement best practice.

Although the workshops in this case study were motivated by the COVID-19 pandemic forcing teaching online, the recommendations arising from the evaluation are applicable to synchronous online teaching development more generally. Similarly, while the case study focused on the Zoom web-conferencing platform, recommendations may be translated to other synchronous online teaching platforms with comparable capabilities such as Blackboard Collaborate, WebEx, and Microsoft Teams.

The prevalence of online education has grown dramatically over many years (Kebritchi et al., 2017), and the growth rate would only be expected to accelerate with the COVID-19 pandemic causing ongoing disruptions

to learning and teaching norms. Consequently, the need for professional development in synchronous online teaching is expected to increase in the future. Using situated learning principles to design and deliver professional development in this area is recommended, as it enables educators to learn from experts in an authentic manner that promotes the transfer of knowledge into practice.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chalmers, L., & Keown, P. (2006). Communities of practice and professional development. *International Journal of Lifelong Education*, 25(2), 139–156. <https://doi.org/10.1080/02601370500510793>
- Cho, M.-H., & Rathbun, G. (2013). Implementing teacher-centred online teacher professional development (oTPD) programme in higher education: A case study. *Innovations in Education and Teaching International*, 50(2), 144–156. <https://doi.org/10.1080/14703297.2012.760868>
- Collins, A. (1988). *Cognitive apprenticeship and instructional technology. Technical report*. <https://apps.dtic.mil/sti/pdfs/ADA203609.pdf>
- Cowling, M., & Birt, J. (2018). Pedagogy before technology: A design-based research approach to enhancing skills development in paramedic science using mixed reality. *Information*, 9(2), 29. <https://doi.org/10.3390/info9020029>
- Dart, S., Cunningham-Nelson, S., & Dawes, L. (2020). Understanding student perceptions of worked example videos through the technology acceptance model. *Computer Applications in Engineering Education*, 28(5), 1278–1290. <https://doi.org/10.1002/cae.22301>
- De Rijdt, C., Stes, A., van der Vleuten, C., & Dochy, F. (2013). Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: Research review. *Educational Research Review*, 8(2013), 48–74. <https://doi.org/10.1016/j.edurev.2012.05.007>
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National*

- Academy of Sciences*, 111(23), 8410–8415. <https://doi.org/10.1073/pnas.1319030111>
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner. *Journal of Learning Design*, 10(1), 20–30. <https://doi.org/10.5204/jld.v9i3.293>
- Gregory, J., & Salmon, G. (2013). Professional development for online university teaching. *Distance Education*, 34(3), 256–270. <https://doi.org/10.1080/01587919.2013.835771>
- Herrington, J., Mitchell, V., Rowe, M., & Titus, S. (2015). The case studies: Authentic learning. In V. Bozalek, D. Ng'ambi, D. Wood, J. Herrington, J. Hardman, & A. Amory (Eds.), *Activity theory, authentic learning and emerging technologies: Towards a transformative higher education pedagogy*. Routledge.
- Herrington, J., Reeves, T. C., & Oliver, R. (2010). *A practical guide to authentic e-learning*. Routledge.
- Jones, S. J. (2016). Multi-purposing synchronous web-based collaboration tools. *The Community College Enterprise*, 22(2), 55–59. <https://www.proquest.com/docview/1858820971>
- Kebritchi, M., Lipschuetz, A., & Santiago, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, 46(1), 4–29. <https://doi.org/10.1177/00472395166661713>
- Kilgour, P., Reynaud, D., Northcote, M., McLoughlin, C., & Gosselin, K. P. (2019). Threshold concepts about online pedagogy for novice online teachers in higher education. *Higher Education Research and Development*, 38(7), 1417–1431. <https://doi.org/10.1080/07294360.2018.1450360>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Little, D., & Green, D. A. (2021). Credibility in educational development: Trustworthiness, expertise, and identification. *Higher Education Research & Development*, 1–16. <https://doi.org/10.1080/07294360.2020.1871325>
- Moore, K. A., & Pearson, B. J. (2017). Soft skills in an online class. *HortTechnology*, 27(5), 583–585. <https://doi.org/10.21273/HORTTECH03672-17>
- Ní Shé, C., Farrell, O., Brunton, J., Costello, E., Donlon, E., Trevaskis, S., & Eccles, S. (2019). *Teaching online is different: Critical perspectives from the literature*. Dublin: <https://openteach.ie/wp-content/uploads/2019/11/Teaching-online-is-different.pdf>
- Norton, L., Aiyegbayo, O., Harrington, K., Elander, J., & Reddy, P. (2010). New lecturers' beliefs about learning, teaching and assessment in higher edu-

cation: The role of the PGCLTHE programme. *Innovations in Education and Teaching International*, 47(4), 345–356. <https://doi.org/10.1080/14703297.2010.518426>

Watts, L. (2016). Synchronous and asynchronous communication in distance learning: A review of the literature. *Quarterly Review of Distance Education*, 17(1), 23–32. <https://proquest.com/docview/1794526758>



8

Life in the New Normal: A Critical Analysis and a Case Study of the Online Intercultural Exchange

Malinee Prapinwong and Junko Dosaka

Introduction

None can deny that a cultural exchange or cultural immersion programme has a long-lasting impact on individuals who experienced it. The rationale of intercultural exchange comes from the belief that an encounter with other cultures can change one's view to the world, especially when the cultural encounters focus on the perspectives and understandings of the underlying cultural values. The cultural immersion, exchange or studying abroad programmes are highly valued because the participants gained direct experiences and engagement with the target language and culture by physically living in that country.

Before the pandemic, there were approximately at least 5.5 million students globally involved in the international mobility programmes at

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tertiary levels (UNESCO Institute for Statistics [UIS], 2018). However, the countries' travel bans and restrictions resulting from COVID-19 have negatively impacted the international exchange programmes around the world. The international programmes and fundings are temporarily postponed or cancelled due to the country's closure, while remote learning has unprecedentedly become a new normal. The question is: can online learning offer an alternative and still foster empathy, trust, and openness through the virtual intercultural exchange?

Another aspect of the virtual exchange involved new ways of communication. Emergence of new media technologies that allow the easy making of video clips, digital animation, and media editing enhances its meaning-making process of the interaction during the exchange. We no longer need to communicate through only text-based chat programmes. People express emotions, connect through social media, interact virtually in real time, and share news and events instantly.

The virtual intercultural exchange is an initiative to blend the language learning, intercultural communication, and digital literacies by connecting educators in different places through the myriad of new social media tools. Learners in one place can easily interact culturally with those in a long distance. The virtual intercultural exchange is also believed to play a significant role in the internationalisation of higher education and to foster global citizenship by engaging participants in critical discussions about socio-cultural issues (Wu, 2017).

This chapter explores the cultural exchange programme via online platforms between Taiwan and Thailand. The online intercultural exchange (OIE) might have been overlooked but starts to receive more attention from educators and researchers during the past few years, especially amidst the pandemic. It is believed that the potentials of technology could bring in collaboration from foreign counterparts without having to physically cross borders.

The Significance of Intercultural Exchange

Intercultural or learning exchange programmes have long been known to create an impact on students' cognitive, affective, and behavioural domains (Liu, 2019). It is believed to also promote respect and mutual understanding for other cultures beyond the borders (UNESCO, n.d.) because learners must spend a specified period of time in a foreign context to experience a new language and interact with people from different cultures. They need to adapt themselves to new cultural and social norms. Therefore, intercultural competence is one of the expected goals for language learners to achieve from studying abroad (Dwyer & Peters, 2004; Root & Ngampornchai, 2013). The learners in the study-abroad programme reported a better understanding of their own cultures and biases (Dwyer & Peters, 2004).

In foreign language learning contexts, a number of early researches showed that study-abroad programmes can increase learners' language proficiency, especially in the domain of fluency, even though they spent only a short duration abroad (Collentine, 2009). However, it is important to note that studying abroad may not always bring long-term change to the intercultural competence. Behrnd and Porzelt (2012) argued the study-abroad group did not equally exhibit the intercultural competence in cognitive, affective, and behavioural dimensions. The research concluded that the duration of studying abroad has an influence on the development of intercultural competence, which means that the longer the study-abroad period lasts, the better chance for learners to develop the intercultural competence.

Nevertheless, study-abroad opportunities may not be available to all students due to limited funding, financial constraints, university policies, and most recently the pandemic. Study-abroad programmes have been disrupted due to the coronavirus pandemic. According to a survey administered to 2700 students by an international student recruitment agency in October 2020, 38.6% of the students had to postpone their studies due to travel restrictions and health risks. Thus, virtual study abroad emerges as a new alternative to compensate for the learning disruptions (Pang, 2020).

Virtual Intercultural Exchange

Virtual exchange refers to a learning activity that allows interaction and collaboration with partners from other countries through various online communication tools (O'Dowd, 2007). Virtual intercultural exchange is used interchangeably with other terms such as Online Intercultural Exchange (OIE), Online International Learning (OIL), Collaborative Online International Learning (COIL), Telecollaboration, or Teletandem are different names which have been used in the last decade to refer to a form of virtual mobility aimed for cultural interaction. It is being increasingly adopted by university educators in Europe and elsewhere as a supplement for physical student mobility or even as a substitute of that (O'Dowd, 2013; Orsini-Jones & Lee, 2018).

The virtual exchange can potentially serve as an alternative for cultural exchange if the pedagogical activities are organised for learners to experience different cultural values, norms, and traditions. These online interaction projects have included several aims such as linguistic development (Belz, 2003; Toyoda & Harrison, 2002), affective domain such as motivation, engagement, attitude (Canals, 2020; Ozkos & Gimeno-Sanz, 2019), and intercultural communicative competence (Jung et al., 2017; Lee & Song, 2019).

The virtual intercultural exchange is not a new concept. It was widely popular during 1999–2003 in Western countries at the beginning of the invention of the internet. The beginning period of online interaction is seen in the reports on eTandem (O'Dowd, 2007) which pairs native speakers of two languages to help each other learn their target languages. Several reports and articles were published during the time to inform and guide other educators who wanted to implement the online exchange projects.

In recent years, the term telecollaboration has emerged as an affordable approach to gaining intercultural communicative competence through the online exchange. Telecollaboration, which is used interchangeably with virtual intercultural exchange, involves the use of internet tools to facilitate the communications between two or more international partnerships. Research on telecollaboration demonstrates that it can promote

the exchange of intercultural knowledge. (Akiyama & Cunningham, 2018; Lee & Song, 2019) and used as instructional intervention for a productive learning environment (Kurek & Müller-Hartmann, 2018). According to Lee and Song (2019), the study-abroad and telecollaboration methods significantly promoted L2 learners' perceived engagement and confidence at similar levels, whereas on-campus language study (i.e., the control group) did not. The telecollaboration setup for the study met the conditions stated by Allport (1954), who hypothesised four conditions for optimal intergroup contact: equal status, common goals, intergroup collaboration without competition, and the support of authorities for the contact. The findings indicated that the telecollaboration met all the above conditions. As a result, the experiences in telecollaboration and the study-abroad method significantly improved the Intercultural communicative competence levels of the participants.

The Role of English as a Lingua Franca (ELF) in Online Exchange

The telecollaborative research and practices have been around for more than three decades and mostly took place in Western countries and within the same continents, for example, Polish and German EFL student teachers (Kurek & Müller-Hartmann, 2018); the US-US students (Lee, 2004). In recent years, the field is undergoing expansion with the advancement of technology and diversification of participants (Akiyama & Cunningham, 2018). Its adoption in Asian contexts has been increased recently (Fuchs, 2019) while a few studies showed a cross-continent interaction has been more common, for instance, US-Spain (Oskoz & Gimeno-Sanz, 2019) and Hongkong-Germany (Fuchs, 2019). There is a growing number of English-as-a-foreign-language research on telecollaborative learning (Jung et al., 2017) as well as an increased acceptance of the role of English as a Lingua Franca (ELF).

The notion of English as a Lingua Franca (ELF) stems from the fact that English has become an international language used more often by non-native speakers of English (Jenkins, 2009). It is undeniable that the

speakers of English whose first language is not English actually outnumber those for whom it is their mother tongue (Crystal, 2003; Graddol, 2006). Currently, English is used by nearly a third of the world's population, and approximately at least 70% of them are not "native" English speakers (Ahn, 2014; Jenkins, 2009). The interactions mostly occur among "non-native" speakers of English (Jindapitak & Teo, 2010). The interaction carried out in English as a Lingua Franca which occurs between non-native speaker dyads is believed to make learners become aware of pluralisation of English. Online exchange in foreign language classrooms is a feasible, practical way to give learners opportunities to expose themselves to other cultures without feeling intimidated by their limited proficiency (Jung et al., 2017). Even if their English language proficiency was low and could be difficult in carrying out simultaneous, extended conversation with native speakers of English, there are still options to pair them with non-native speakers with similar proficiency levels.

Background and Context of the Study

In Thailand's context, the case study was part of the ongoing, long-term project integrated into a mandatory course for the preservice teacher programme in the Faculty of Education at a large public university in Thailand. The overarching goal of the course is for preservice teachers to develop intercultural competencies, critical views on global issues, and to have exposure to cultural experiences different from their own. In the course, their international perspectives were enriched through a series of intercultural-enhanced activities. For example, when paired with US students in community colleges, the students were surprised to learn how their life goals and daily routines were so different from each other. As a result, they became more aware of the differences and multiple realities of the world they lived in.

In the long-term project, the first author of this chapter initiated several intercultural exchange projects for each academic year including in-person interactions with foreign guest speakers or groups of foreign students, as well as the virtual interaction such as email exchanges with

the students in the US. and Japan. Each semester the students who enrolled in the class were paired virtually with partners from different countries.

The intercultural exchange with Taiwanese students took place for one semester before and the case study of this project was the second time for such exchange. For Thai preservice teachers, the exclusive benefit of virtual exchange is that they can also see it as a teaching model to facilitate their own virtual exchange in the future (Grau & Turula, 2019). For the Taiwan setting, the students do not normally have many communication opportunities with international students using English. This online interaction was much needed for both cohorts to stimulate their sense of global awareness and multiculturalism.

In this particular phase of the study, thirteen Taiwanese college students (Junior and Senior, Japanese and English major) and twenty-eight Thai college students (Sophomore, non-English major) interacted with each other in English through LINE[®] application, which is a popular chat programme widely used in Asia. Taiwanese students enrolled in the course to learn about multiculturalism both in Japanese and English. Their English proficiency level ranged from intermediate to advanced level. Thai students' English proficiency levels ranged from beginner to intermediate.

During the LINE[®] group communication, the students in each country formed small groups of four to five. Each group participated in the activities within the small groups and the whole class. The application allows for both synchronous and asynchronous interactions. Even though the time difference between the two countries is only one hour apart, the project had to rely on asynchronous activities due to the complexities of their class schedules.

The Case Study

The goals for the virtual intercultural exchange were for the students: (1) to develop an actual sense of being a member of the global society; (2) to learn multiculturalism from each other; and (3) to enhance students' English ability. The instructional tasks were intended to involve learners

in sharing, exchanging information about their languages and cultures asynchronously.

As the instructors, we aimed to include three components. The first component was that, through this project, our students would be more aware of the global society that they lived in. Therefore, they should be able to develop global awareness through interacting with other people from different cultural backgrounds. The second component was to learn multiculturalism through encountering unfamiliar cultural issues. We as instructors expected that our students might encounter some intercultural issues, such as unfamiliar cultural events or customs. We hoped that our students would be curious about cultural differences or similarities which would elicit students' discussions to learn from each other. Such discussions would guide our students to develop their problem-solving skills that we face in the global society.

The third component was to enhance our students' English communicative competence by recognising that English has become an international language or *lingua franca*. We wanted to provide a channel for our students to enhance their English communicative competence through real interactions beyond textbooks and classroom walls. The majority of our students rarely had any interactions with foreigners in everyday life. Therefore, the use of ELF gave them a non-threatening, relaxed environment to speak English without the fear of making grammatical mistakes or worrying about their English levels. They were informed about the communicative purposes and tried their best to communicate in English.

They were assigned to work in a group of three or four, then made video presentations on any topics to introduce themselves and the cultures of each country, for example, Thai students made a video presentation to show their campus life. Taiwanese students introduced the famous food culture such as bubble milk tea. Then they were assigned to ask and respond to each other's questions.

The Case Study Evaluation

The evaluation of the case study focused on the perceptions of the two instructors and forty-one learners in the online interaction exchange. The information for the case study evaluation was from the asynchronous discussions, videos, and interviews with the ten participants both in Thailand and in Taiwan. Finally, teachers' observation and reflection were employed for the analysis of the project.

The following themes were found throughout our project. The themes included telecollaboration as an alternative approach to cultural exchange, the teacher intervention needed, and awareness of the English as a *Lingua Franca*.

Alternative Approach to the Cultural Exchange

The overall experiences were positive for both Taiwanese and Thai learners. The video exchange asynchronously connected them through digital media. They enjoyed intercultural communication through the social media tool that allowed a multimodal mode of interaction including videos, pictures, voices, text-based chat, emoticons, and stickers. These tools offered opportunities for authentic communication and facilitated the process of meaning-making and interpreting which are important skills in the cultural exchange.

Both parties found the online cultural exchange beneficial to improve their affective domains in their intercultural competence. That is, it gave them motivation for language learning. As some of the students expressed "I can understand better about intercultural communication through fun activities rather than reading from a textbook". "We didn't have many chances or resources to get in touch with foreign students. I am grateful for the experience". They all mentioned that they would like to try this kind of interaction with foreign students again if there were future opportunities. One student mentioned, "If I interacted with people from different cultures, I would discover something new".

To the question about what this experience meant to them, one student said,

it means a new trip.... It taught me to observe [from] several angles [of an issue]. I realized the world is in front of me as long as I'm willing to open my mind and give it a try. This experience is also a trip to promote my culture to other foreign students.... I could notice something I never paid attention to before and start to care about small issues in Taiwan.

The intercultural interactions mainly involved the cultural knowledge exchange on various topics such as greetings, transportation, campus life, and country facts. The exchange was facilitated by the videos that each group made to introduce their cohorts to their chosen topics. The positive outcome led the students to self-reflect on their own cultural practices, and their willingness to understand different cultures as well as their own. In that sense, students earned valuable lessons beyond textbooks. These interactions provided such a positive impact on students' learning attitudes.

Teaching Intervention Needed

The degree of interaction and involvement in the shared activity depends on how well the curriculum is structured and designed, and how the topics of discussions are framed within the context of the class objectives. Most importantly, how each partner can reach an agreement in the learning goals that the learners from each institution expected.

Teacher intervention started from the early planning of the exchange. The factors that were taken into consideration included the semester time frames, mutual learning goals, task designs as well as the technology setup. There were challenges that the online intercultural exchange practitioners face, especially on the alignment of curricular needs on both contexts. In our cases, the mutual goals included an understanding about multiculturalism and the authentic environment for English language use.

Additionally, apart from being the curriculum designer, we as teacher practitioners who implemented the telecollaboration project needed to have ICT competencies to overcome logistical and technical challenges that might occur during the interaction, especially in the synchronous

discussions. We needed to be ready to facilitate and nurture a non-threatening learning environment to make the online interaction as smooth as possible.

In this project, however, there were a number of factors involving the teacher intervention or lack thereof that contributed to the infrequency of the interaction such as: (1) unfamiliarity with the online interaction of the students in Taiwan and Thailand; (2) different class schedules; and (3) lack of active facilitator role during the exchange.

Both Taiwanese and Thai students tended to be quiet and shy to interact with their counterparts. They were reluctant to take initiative by themselves. Some students even pointed out they did not have something in common because they had different areas of study, if they did, they could have conversed more frequently. Thus, the unfamiliarity with each other might have caused their less willingness to interact with each other. With teacher intervention, they should be probed to communicate by asking more questions to their peers. For more meaningful interaction, teaching presence is required.

Moreover, having a face-to-face orientation before the project started would ease students' unfamiliarity and uncertainty with people whom they were going to interact with. Learners should be scaffolded for the exchange such as getting feedback, advice on the conversation topics, or task assignments to increase more learner-to-learner interactions.

Awareness of English as a Lingua Franca (ELF)

The case study showed that communication between non-native speaker dyads could lead to a greater awareness of the importance of English. The learners explained that they were not afraid of making grammatical mistakes if they could get their message across. Instead of using native speakers' norms that focus on the accuracy of language forms rather than language functions, they were encouraged to think of English as a Lingua Franca to communicate with their non-native peers. They also realised that learning English played a vital role in their lives. So the virtual exchange provided a valuable, international platform for them to start authentic conversations in English. The video tools in the application

helped promote English listening and speaking skills. When the learners produced their videos, they had to come up with how to present the information in English, how to communicate clearly and create the meanings they intended to convey. They made several grammatical errors and pronunciation mistakes, but the overall messages were delivered without any misunderstandings. Some Thai students knew Chinese language, they also included greetings in Chinese to communicate with their Taiwanese peers. Their interaction included code-switching, the use of local expressions, and local terms of reference.

The students in Thailand were prepared for the role of ELF before engaging in the virtual exchange. Through listening activities, they were taught to be familiar with varieties of non-native accents while accepting their Thai accents without being pressured to meet the “standard” pronunciation of English. Even if they were only beginners of English, they felt that they could communicate in English and learned about Taiwanese culture.

Conclusion

The virtual intercultural exchange challenges the old notion that the learners need to go to another country to learn the target language and culture. During the COVID-19 pandemic, virtual learning became a new norm across the world. This case study illustrated how the virtual intercultural exchange between Thailand and Taiwan could potentially lead to an alternative to the traditional intercultural exchange. Even though the virtual intercultural exchange may not be able to replace all aspects of in-person cultural exchange or study-abroad programmes, it can potentially be used to prepare learners for cognitive and affective aspects of intercultural competence development such as motivation, openness, and curiosity to learn about other cultures without physically crossing the borders. The success of such exchanges often depends on their appropriate integration into the language classroom. It is necessary to emphasise the role of the teacher in telecollaborative exchanges in order to make their virtual intercultural exchange as productive as possible.

References

- Ahn, H. J. (2014). Teachers' attitudes towards Korean English in South Korea. *World Englishes*, 33(2), 95–222.
- Akiyama, Y., & Cunningham, D. J. (2018). Synthesizing the practice of SCMC-Based telecollaboration: A scoping review. *CALICO Journal*, 35(1), 49–76.
- Allport, G. W. (1954). *The nature of prejudice*. Addison-Wesley.
- Behrnd, V., & Porzelt, S. (2012). Intercultural competence and training outcomes of students with experiences abroad. *International Journal of Intercultural Relations*, 36(2), 213–223.
- Belz, J. A. (2003). Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology*, 7(2), 68–99.
- Canals, L. (2020). The effect of virtual exchanges on oral skills and motivation. *Language Learning & Technology*, 24(3), 103–119.
- Collentine, J. (2009). Study abroad research: Findings, implications, and future directions. In M. H. Long & C. J. Doughty (Eds.), *The handbook of language teaching* (pp. 218–233). Blackwell Publishing Ltd.
- Crystal, D. (2003). *English as a global language*. Cambridge University Press.
- Dwyer, M. M., & Peters, C. K. (2004). *The benefits of study abroad*. <http://www.iesabroad.org/study-abroad/news/benefits-study-abroad#sthash.r4o2pfPo.dpbs>
- Fuchs, C. (2019). Critical incidents and cultures-of-use in a Hong Kong-Germany telecollaboration. *Language Learning & Technology*, 23(3), 74–97.
- Graddol, D. (2006). *English next: Why Global English may mean the end of English as a foreign language*. The British Council.
- Grau, M. K., & Turula, A. (2019). Experiential learning of telecollaborative competences in pre-service teacher education. *Language Learning & Technology*, 23(3), 98–115. <http://hdl.handle.net/10125/44698>
- Jenkins, J. (2009). *The phonology of English as an international language*. Oxford University Press.
- Jindapitak, N., & Teo, A. (2010). *Thai in blood, American in taste: English learners' preferences for varieties of English*. Conference proceedings of the 2nd International Conference on Humanities and Social Sciences. Faculty of Arts, Prince of Songkla University, Thailand. <http://fs.libarts.psu.ac.th/research/conference/proceedings-2/2pdf/004.pdf>
- Jung, Y., Kim, Y., Lee, H., Cathey, R., Carver, J., & Skalicky, S. (2017). Learner perception of multimodal synchronous computer-mediated communication in foreign language classrooms. *Language Teaching Research*, 23(3), 287–309.

- Kurek, M., & Müller-Hartmann, A. (2018). “I feel more confident now” – Modeling teaching presence in teacher training online intercultural exchange. *European Journal of Applied Linguistics and TEFL*, 7(2), 157–177.
- Lee, J., & Song, J. (2019). Developing intercultural competence through study abroad, telecollaboration, and on-campus language study. *Language Learning & Technology*, 23(3), 178–198.
- Lee, L. (2004). Learners’ perspectives on networked collaborative interaction with native speakers with native speakers of spanish in the US. *Language Learning & Technology*, 8(1), 83–100.
- Liu, W. (2019). “Education abroad” for international advisors: What is the impact on their professional development? *Journal of International Students*, 9(1), 306–319. <https://doi.org/10.32674/jis.v9i1.258>
- O’Dowd, R. (2007). Introduction. In R. O’Dowd (Ed.), *Online intercultural exchange: An introduction for foreign language teachers* (pp. 3–16). Multilingual Ltd.
- O’Dowd, R. (2013). Telecollaborative networks in university higher education: Overcoming barriers to integration. *The Internet and Higher Education*, 18, 47–53. <https://doi.org/10.1016/j.iheduc.2013.02.001>
- Orsini-Jones, M., & Lee, F. (2018). *Intercultural communicative competence for global citizenship: Identifying rules of engagement in telecollaboration*. Palgrave Macmillan. <https://doi.org/10.1057/978-1-137-58103-7>
- Oskoz, A., & Gimeno-Sanz, A. (2019). Engagement and attitude in telecollaboration: Topic and cultural background effect. *Language Learning & Technology*, 23(3), 136–160.
- Pang, C. (2020). *The impact of Covid-19 on study abroad: Oct 2020 survey results*. International student recruitment trends. Higher Education marketing. <https://institutions.educations.com/insights/the-impact-of-covid-19-on-study-abroad-oct-2020-survey-results>
- Root, E., & Ngampornchai, A. (2013). “I came back as a new human being”: Student descriptions of intercultural competence acquired through education abroad experiences. *Journal of Studies in International Education*, 17(5), 513–532.
- Toyoda, E., & Harrison, R. (2002). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology*, 6(1), 82–99.
- UNESCO. (n.d.). *Cultural exchange programmes*. <https://en.unesco.org/creativity/policy-monitoring-platform/cultural-exchange-programmes>

- UNESCO Institute for Statistics. (2018). *Inbound internationally mobile students by continent of origin*. <http://data.uis.unesco.org/Index.aspx>
- Wu, Z. (2017). Book review: Online intercultural exchange: Policy, pedagogy, practice. *Journal of Multilingual and Multicultural Development*, 39(4), 369–371. <https://www.tandfonline.com/doi/full/10.1080/01434632.2017.1307047>



9

Supporting Multidisciplinary Transitions to the Blended Environment: Innovations and Challenges for Lecturers

Teri-Lisa Griffiths, Jill Dickinson, and Anne Kellock

Introduction

Within the context of an already diverse and challenging Higher Education (HE) environment (see, for example, Dickinson et al., 2020), educators with little or no previous experience in blended teaching, assessment, and student support were required to make precipitous changes within a short space of time due to the restrictions imposed by the COVID-19 pandemic (Bryson & Andres, 2020; Parkin & Brown, 2020). Previous studies have noted a number of challenges for educators switching to online delivery, including absorption of the expanding pedagogical scholarship (Kebritchi et al., 2017), technological resistance or

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anxiety (Kilgour et al., 2019), and concerns about increased workloads (Downing & Dymont, 2013). All of these studies were conducted before the COVID-19 pandemic and therefore fail to account for factors pertinent to the remote working that were necessitated by the pandemic, including the impact of personal responsibilities, health anxiety, and access to technological resources at home.

Against this backdrop, the authors sought to explore how educators approached the changes required to deliver teaching, assessment, and student support safely during the COVID-19 pandemic, whilst managing pressure to preserve a dynamic student experience. Adopting a case study approach to generate the requisite depth of understanding, the researchers focused on one of the largest higher education institutions (HEIs) in the United Kingdom. One of the HEI's key strategic aims is to be a leading applied university, which engenders a continuing focus on external engagement, including with local and national employers and the local community. This emphasis on partnership working presented significant challenges considering the regulations around social distancing, and the potential impact of shifting priorities within external organisations. The applied approach also poses a challenge in the remote classroom environment. Shulman's 'signature pedagogies' emphasise the unique ways that professional and profession-focused teaching are delivered to educate future practitioners, underlining the need to 'perform' as a key part of such a course (2005, p. 52). Central guidance from institutional leadership prioritised health and safety and protecting the broader student experience. The minutiae of operational matters related to teaching, assessment, and student support were decided at a local level, in accordance with subject-specific requirements.

Following receipt of ethics approval from the HEI, the research team recruited 26 self-selected participants from a multidisciplinary pool of lecturers across the HEI for this qualitative, longitudinal case study during the academic year 2020–2021. Three participants were then invited to take part in the two-phase research representing different disciplines, namely landscape and built environment, health and well-being, and education. Each of the participants selected had reported a specific innovation in their initial interviews. The three participants represented in this chapter were all experienced academics involved with teaching, assessment, and student support at either undergraduate and/or

postgraduate levels. Each participant took part in two semi-structured interviews using a video conferencing platform. The first interview captured data early in the academic year in October/November around participants' views on their transitions to the blended environment. The same participants were invited to reflect on their experiences during the second semester in February/March 2021. Building on their previous experience of using creative research methods, the researchers invited each participant to share a photograph of their home working space in each interview to stimulate discussion around their experiences of making the transitions to the new environment, including their perceptions of their working environment. The interview data were thematically and iteratively analysed (Braun & Clarke, 2006).

This chapter will explore two broad areas around participants' experiences of their transitions to the new blended environment: examples of the innovative approaches that they took and some of the challenges that they faced. Each of these will be considered in turn before the authors draw on the findings to identify opportunities for future research in this area and suggest recommendations for the benefit of future curriculum and resource planning.

Innovative Approaches

Despite trepidations about making successful transitions to the blended environment, all the participants were focused on a quality student experience. The participants reported how they had identified and made use of a variety of opportunities for developing new approaches to their work (which included self-exploration of new technologies and collegial working) whilst maintaining appropriate pedagogies for their subject disciplines. This included dual consideration of both academic and professional practice standards through the application of 'signature pedagogies' (Shulman, 2005, p. 52). This section will detail key innovations, such as communication tools, creating interactive teaching resources, and delivering remote alternatives to practical pedagogies.

Communication Tools

All three participants recognised the benefits of peer support in easing the transition to the blended environment, and proactively utilised a wide range of communications tools to help facilitate this. Participant 2 notably focused on utilising additional tools to promote communication amongst both their students and their staff group. They created a chat group using a widely used messaging service and a collaborative newsletter delivered regularly via email.

The weekly newsletter was circulated to all students across an undergraduate cohort. It provided clear detail on teaching and learning activities, and also included other materials to promote engagement, including a cartoon, a link to current affairs (e.g. International Women's Day), and book or podcast recommendations. Illustrating how maintaining regular communication can be a critical component for encouraging student engagement and developing a shared sense of belonging, (Bryson & Andres, 2020; Kebritchi et al., 2017), Participant 2 reflected on the co-production of the newsletter with the students and its success.

We're sending them weekly newsletters ... we do that across all three BSc cohorts, there is a bit of an update about the modules that they're currently studying and what's expected in the next week. There's some fun bits that students attach, there's fun bits that we stick in now and again. So, it seems to have been ...received really, really well. [It] seems to work really well in terms of maintaining contact and keeping students engaged. (Participant 2)

The co-creation of the newsletter may address the need for social interaction with a learning community to promote belonging (Kebritchi et al., 2017). Participant 2 further promoted student interaction through the use of a messaging service.

The apprentices all have their own WhatsApp group as well, and there's a lot of traffic on there. And I have access to that via my work mobile, so I do monitor that. They know I don't work on a Monday and I don't look over the weekend. So, I've been really clear, but I do monitor that. [...] sometimes they share really good tips, they're really supporting each other.

Sometimes I ask questions as well, sort of, 'What's happening with this?' (Participant 2)

They also reported using the group to manage any issues and identify any oversights related to the virtual learning environment (VLE) and the availability of resources.

I had a couple of queries today, like 'Where are the placement handbooks [...]?' ... that's been really useful to be able to pick up those kinds of conversations. (Participant 2)

In this way, Participant 2 is utilising the group chat as an alternative to those informal on-campus discussions which are not possible in the remote environment.

Interactive Teaching Resources

All participants reported utilising new tools in the switch to blended delivery, including the chat function in online sessions and various platforms outside of the VLE, such as Padlet, for facilitating interactive activities. Participant 1 reported a particularly creative approach to designing interactive teaching materials. They had utilised their daily walk, during the national lockdown in March 2020, to capture video clips that they could incorporate into their teaching and learning materials.

I went through all my lectures and sort of listed everything that I talk about. And I've gone out over the lockdown [...] with a video camera, and I've done one-minute slots for all of those and created a massive [...] database. So, the idea is when I'm talking to the students, since I'm not face to face with them, I could maybe actually show them what I would normally have to verbally describe at the front of the class. (Participant 1)

Although they acknowledge that they are considering how to manage not being 'face-to-face' when designing their online materials, it is important to note that this innovation can be considered an example of best

practice by using technology as an ‘integral element rather than a bolt-on consideration’ (JISC, 2020, p. 15).

Participant 1 also reported purchasing a green screen which they used to encourage student engagement by changing their background and creating a physical display which they could make visible on camera when teaching. The display included module related images and materials as well as recommended texts that could be changed and updated as the academic year progressed.

hopefully the students will ask questions when they see the backdrop and it will all kick off some sort of interesting discussions and debates.
(Participant 1)

They disclosed their belief that their display reflected their professional identity, ‘It exemplifies me [and] what drives me’, which they had ‘put quite a bit of time into’. This particular innovation emphasises the importance that Participant 1 places on communicating their values to their students (Shulman, 2005).

Participant 1’s ability to engage with this type of innovation also evolved as the academic year progressed. When asked if they were still creating clips, they noted:

Not as much because I’ve not had time and over the winter it was much more challenging. (Participant 1)

Although time was a barrier to the continuation of this innovation, Participant 1 had a ‘massive amount of material now’. They explained how this would become a repository of materials that they could edit and reuse in the future. This implies that the time taken to make these creative adjustments for blended delivery may support them in preparing resources in the future.

Remote Alternatives to Practical Pedagogies

The third innovative example centred around the challenges presented by the COVID-19 pandemic for continued engagement with practical activities. All of the participants referred to concerns regarding placement activity; the necessity of such activity ranged from required to recommended between the courses in this case study. For some courses, preparing students for placement seemed to be entwined with the physical spaces they occupied on-campus. Participant 3 expressed how the materiality of the campus was important to their subject because of the resources required in their teaching, demonstrating their perception of the value of distinctive spaces for maintaining subject specialist approaches (Shulman, 2005):

normally we have a room [...] which is set up as the kind of play and creativity space. All the back cupboards are labelled up with boxes of, you know, like play therapy stuff, art therapy. (Participant 3)

Participant 3 sought to replicate some of their valued on-campus approaches within the online classroom by creating and posting ‘packs’ of learning materials to students to enhance engagement with online practical workshops. In this example, Participant 3 acknowledges that they ‘like things to be ordinary’ and that they were purposefully ‘going to teach how we used to teach to kind of go back to habits and routine’. This illustrates the ‘pervasive’ and ‘replicated’ nature of entrenched practice (Shulman, 2005, p. 54) and could relate to the wider context of delivering teaching during a pandemic where educators and students alike may derive comfort from familiarity (Jandric et al., 2020).

Participant 3 also reported how their students were prevented from attending placements due to COVID-19 restrictions. This led to the creation of ‘20 placement tasks that [students] could do remotely’. These simulation tasks included making use of information freely available online to create a case study, reading assigned texts, observation via video recordings, and engaging with tasks to encourage reflection. Participant 3 reported concerns that their students might view these activities negatively and experience a reduction in their motivation as a result.

So, you had to remotely encourage them to do that, because if they were clearly thinking, well, this isn't placement, [...] why [are] we doing this task. (Participant 3)

Evidence suggests that this anxiety may be misplaced, simulations are a well-established classroom-based substitute for placement and are generally well-received by students (see, for example, Davies, 2002). However, when comparing the two, Participant 3 may be aware that their students may view simulation as an inferior alternative to placements.

Challenges

Despite their enthusiasm for these innovative approaches, participants also reported challenges which impeded their ability to design, develop, and implement their innovations to meet their own standards. This section will discuss three key issues around technology and access to resources, time pressures, and loss of networks.

Technology and Access to Resources

A key concern reported by all three participants was the necessity of utilising new technologies. These concerns spanned across both basic functions and optimum use to facilitate new ways of working.

Despite being experienced lecturers, participants reported feelings of uncertainty related to their changed status as blended educators. Kilgour et al. note that educators can find the adjustment to the online environment 'deeply unsettling because they can run counter to the habits, conviction and experience gained in a non-online environment' (2019, p. 1418). For example, Participant 3 lamented the inability to 'read the room' in virtual settings and this fostered a belief that the experience was more 'complicated' as a result. Bryson and Andres note the inability to read social cues as a particular challenge for online educators (2020). There was evidence that participants started from a perspective of trying to replicate in-class activities, despite recognition that attempting this

approach is often unsuccessful (Kebritchi et al., 2017) and encountered frustration when this revealed limitations of the technology. This had an impact on participants who had to rethink module content and learning activities of previously successful face-to-face sessions, thus challenging the bespoke nature of their teaching within specific disciplines (Shulman, 2005).

Can't do that over Zoom. Can't do that over any platform because, you can't you can't provide them with that many resources. (Participant 3)

The literature notes the need for staff training to support educators in navigating the 'sea of platforms and online educational tools' (Pokhrel & Chhetri, 2021, p. 135). Whilst none of the participants reported taking part in formal training sessions, they did acknowledge the resources which had been made available to them for self-taught development.

One of the things that we have worked on as a staff team [...] is to make things more accessible, so we are making sure that we are subtitling, that we're looking at colour schemes [for accessibility]. (Participant 2)

There were also reflections about available equipment.

We have looked at some of the disability resources that are available through the university. It did end up me making a big fuss to get an updated laptop because I was still working on an old Windows 7 machine where in PowerPoint you couldn't have automated captions. (Participant 1)

The fact that the participant reports making 'a big fuss' suggests that there were temporal issues with resource availability. Participant 2 also disclosed how they had bought a range of other office implements, including a screen raiser, before the HEI subsequently went on to make such equipment freely available to all its staff.

Time Pressures

All participants reported concerns about the time pressures they were under to enable innovation. Examples included developing pedagogy, increased support of students, and an unsatisfactory work/life balance. This reflects the literature about the inherent issues of an ‘always on’ culture (McDowall, 2017) and how preparing online materials is more time-consuming than preparing face-to-face sessions (Bryson & Andres, 2020; Kebritchi et al., 2017). One participant, who was a part-time member of staff, regularly exceeded her contracted hours. The other participants reported apportioning more of their time to planning teaching (‘I spent an entire summer thinking about precisely what I’m going to deliver. And I’ve never done that before’ Participant 1). The fact that time pressures can hinder the ability to develop the blended offer was directly addressed too:

What I would have liked to do, but just haven’t had the time to explore, is to have a play around with Panopto. (Participant 2)

The language used by Participant 2, ‘have a play around’, when talking about using online tools was replicated in some way by all the participants. This seemed to signify that participants desired some time to be able to explore the options available informally and at their own pace, as well as enthusiasm for continued professional development in this area.

Loss of Networks

As participants made their transitions to the blended environment, they reported the importance of peer networks for mutual support. Participant 3 explained, that despite work-planning restrictions, they had collaborated to team teach a Zoom session in order to support their ‘nervous’ colleague.

Participants lamented the loss of real-world learning opportunities (Participant 3) for impromptu, conversations and problem-solving that would have previously taken place on-campus ‘in corridors and next to

coffee machines' (Participant 2) to help them 'stay connected' (Participant 1). They disclosed the potential for these informal chats to cover a range of topics including specific questions or to generate broader support, for example, in respect of their well-being or with career progression.

I think some of the people I've made contact with, I don't think they've been coping as well as I have. And I didn't realise. (Participant 1)

Participant 2 reported missing 'being able to knock on somebody's door and sort of say, do you know the answer to that?'. There were also concerns that physical distance and increased workloads were impeding access to wider support and making solving issues more complicated.

'when I rang [IT support] the first message is basically, you know, if it's not an emergency, go away because [...] we are experiencing a high level of calls. (Participant 3)

In connection to the findings from the Office for Students (2021), the general approach that some students take by keeping their cameras off caused some anxiety.

There's no interaction, so I have to be absolutely certain they've got everything they need on that topic. (Participant 1)

Participants discussed understanding students' potential rationale for keeping their cameras turned off including 'digital inequality' (JISC, 2020), privacy, and/or confidence. Participant 2 noted that they were 'very aware' of these issues but that, considering the practical nature of their course, the tendency for cameras off 'continues to be a challenge'. There were also concerns about encouraging the development of a culture of student disengagement through miscommunication of expectations. Participant 3 noted how some disability adjustments were not always helpful for encouraging student participation in online sessions, which suggests a need for university student support processes to take the blended environment into account.

Discussion: Lessons Learned

The COVID-19 pandemic has stimulated a 'time of immense and continual change' (JISC, 2020, p. 3). It is evident that this uncertainty will persist beyond the crisis as institutional leaders contend with the impact of this period on their long-term strategies (Parkin & Brown, 2020). Any resultant policies and procedures need to consider the perspectives of stakeholders from all institutional levels to encourage cooperation and trust. The findings from this case study have illustrated the experiences and viewpoints from one such stakeholder group within an HEI.

Acknowledging the limitations presented by the case study's focus on an individual HEI; the small number of participants involved; and the fact that they were all employed as lecturers, the authors make calls for future research to explore the voices of all key stakeholder groups and across the sector. This will further develop the understanding of subject-specific issues facing academics and explore entrenched cultures within specific disciplines (Shulman, 2005). Whilst the case study has drawn on a number of key, recent, and sector-wide reports (JISC, 2020; Office for Students, 2021; Parkin & Brown, 2020), the acceleration of the pace of change necessitated by the pandemic means that further research is needed to ensure that knowledge remains current.

Within this context, the case study demonstrates how lecturers have adopted a variety of responses to this turbulent environment by proactively developing innovative approaches despite facing considerable challenges. Their creativity ranged from surmounting barriers to replicating on-campus teaching practices remotely to the development of completely new materials and methods. Regardless of such differences, the innovative approaches taken by all the lecturers in this case study signified a strong sense that they were focused on delivering quality teaching and maintaining effective relationships with their students in this unfamiliar environment.

The case study demonstrates that these lecturers were mindful of the impact of remote delivery on student interactions, with both tutors and peers, and indicates how their awareness of this issue may have been compounded by their own experiences of losing networks during their move

to the blended environment. It also illustrates examples of the steps that they took to mitigate the changes; for example, adjusting their methods of communication. As students from across the HE sector have reported a desire for increased ‘interactivity and collaboration’ (JISC, 2020, p. 11), there is also evidence to demonstrate the positive impact of developing learning communities for student engagement and the importance of adopting appropriate communications tools (Adams & Wilson, 2020).

It is evident from the case study that the development of such innovative approaches to increase the potential for quality provision requires prior experience of, and confidence in, technology. Reflecting the distinct pedagogies centred around online delivery (Bryson & Andres, 2020; Rapanta et al., 2020), the case study indicates a new emphasis on teaching design, suggesting the importance of specific knowledge around planning blended teaching sessions (as distinct from customary face-to-face sessions) and an understanding of the supporting technologies available. From a practical perspective, educators need to have access to appropriate resources, including office equipment, software, internet access, and training. They may also need additional time to build relevant and engaging teaching materials suitable for the online platforms, become accustomed to the new technologies, and ‘play around’ with available resources to develop their confidence in delivery. As HEIs develop their future strategic and operational approaches, any policy, procedural, and/or practice development that encourages educators to explore new or adapted approaches needs to take into account the inherent impact on workloads. Notwithstanding the aforementioned pressure to be ‘always on’ (McDowall, 2017), and the resultant impact on well-being, rising workloads are a subject of ongoing dispute across the post-16 education sector in the UK (University and College Union, 2021).

The reflections in this case study demonstrate that the innovations necessitated by the pandemic could inform preferable delivery options that may not have otherwise been identified. However, it is important to recognise the limitations of the blended environment. Those leading courses with specialist, technical and practical elements will wish to retain on-campus activities in order to preserve the student experience (Parkin & Brown, 2020). Lecturers in these subjects may also have concerns about the extent to which they will be able to both use their expertise and keep their

knowledge current if on-campus activities are reduced. The COVID-19 pandemic presents significant challenges to ambitions for increased external engagement, including placement opportunities. Although this case study has demonstrated the creative ways in which lecturers have managed these, there remain concerns about both student and provider engagement should such challenges continue (McLaughlin et al., 2020).

Such operational-level factors are being compounded by wider contextual elements, such as the lack of COVID-19 guidance for the HE sector from the central government, which has fostered a culture of isolationist approaches within a competitive HE landscape. Financial challenges will undoubtedly factor into strategies given the ever-present threat of budgetary limitations, for example, the drop in overseas student registrations (Rapanta et al., 2020). There is some concern that the resultant financial implications of Covid-19 could be used for implementing 'pre-existing plans for cost-cutting' (Watermeyer et al., 2020, p. 635). Any future decisions must incorporate the potential for an ongoing change (Parkin & Brown, 2020). The uncertainties presented by this environment necessitate the development of a comprehensive underpinning system of support for both educators and the student body.

This is a pivotal time for HEIs as they evaluate their various responses to the Covid-19 pandemic to identify best practice that they can draw on in their attempts to future-proof themselves within an already challenging HE environment. Within this context, the authors make two principal recommendations for all HEIs across the sector. First, they should ensure that they engage in meaningful consultation with all key stakeholder groups regarding the development of new strategic and operational directions, policies, and practice. Considering the context of the global pandemic, strategic directions should have a focus on fostering well-being amongst staff and students. Second, they should provide timely and accessible training to both educators and students, that is appropriately tailored according to existing levels of experience, to help build skills, knowledge, and confidence in using the available technologies within the blended environment going forwards. The authors hope that the learnings presented by this case study will encourage the development of a wider discourse around the changes needed to underpin the delivery of quality provision within the new landscape for the benefit of all stakeholders involved.

References

- Adams, B., & Wilson, N. S. (2020). Building community in asynchronous online higher education courses through collaborative annotation. *Journal of Educational Technology*, 49(2), 250–261. <https://doi.org/10.1177/0047239520946422>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/11478088706qp063oa>
- Bryson, J. R., & Andres, L. (2020). Covid-19 and rapid adoption and improvisation of online teaching: Curating resources for extensive versus intensive online learning experiences. *Journal of Geography in Higher Education*, 44(4), 608–623. <https://doi.org/10.1080/03098265.2020.1807478>
- Davies, C. H. (2002). Student engagement with simulations: A case study. *Computers & Education*, 39(3), 271–282.
- Dickinson, J., Fowler, A., & Griffiths, T.-L. (2020). Pracademics? Exploring transitions and professional identities in higher education. *Studies in Higher Education*, 1–15.
- Downing, J. J., & Dymont, J. E. (2013). Teacher educators' readiness, preparation, and perceptions of preparing preservice teachers in a fully online environment: An exploratory study. *The Teacher Educator*, 48(2), 96–109.
- Jandric, P., Hayes, D., Truelove, I., Levinson, P., Mayo, P., Ryberg, T., et al. (2020). Teaching in the age of Covid-19. *Postdigital Science and Education*, 2, 1069–1230. <https://doi.org/10.1007/s42438-020-00169-6>
- JISC. (2020). *Student digital experience highlights survey 2020: UK higher education (HE) survey findings*. <https://www.jisc.ac.uk/sites/default/files/student-dei-he-report-2020.pdf>
- Kebritchi, M., Lipsheutz, A., & Santiago, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, 46(1), 4–29. <https://doi.org/10.1177/0047239516661713>
- Kilgour, P., Reynaud, D., Northcote, M., McLoughlin, C., & Gosselin, K. (2019). Threshold concepts about online pedagogy for novice online teachers in higher education. *Higher Education Research and Development*, 38(7), 1417–1431. <https://doi.org/10.1080/07294360.2018.1450360>
- McDowall, A. (2017). The new nowhere land? A research and practice agenda for the “always on” culture. *Journal of Organisational Effectiveness, People and Performance*, 4(3), 256–266. <https://doi.org/10.1108/JOEPP-05-2017-0045>

- McLaughlin, H., Scholar, H., & Treater, B. (2020). Social work education in a global pandemic: strategies, reflections and challenges. *Social Work Education: The International Journal*, 39(8), 975–982. <https://doi.org/10.1080/02615479.2020.1834545>
- Office for Students. (2021). *Gravity assist: Propelling higher education towards a brighter future*. <https://ofslivefs.blob.core.windows.net/files/Gravity%20assist/Gravity-assist-DTL-finalforweb.pdf>
- Parkin, D., & Brown, G. (2020). *Advance HE creating socially distanced campuses and education project: Final Capstone Report*. https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/advance-he/SDCE%20Project_Report_Final_Capstone_Report_1594124518.pdf
- Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of COVID-19 pandemic on teaching and learning. *Higher Education for the Future*, 8(1), 133–141. <https://doi.org/10.1177/2347631120983481>
- Rapanta, C., Botturi, L., Goodyear, P., Guardia, L., & Koole, M. (2020). Online University teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 2, 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59. <https://doi.org/10.1162/0011526054622015>
- University and College Union. (2021). *It's your time – UCU workload campaign*. <https://www.ucu.org.uk/workloadcampaign>
- Watermeyer, R., Crick, T., Knight, C., & Goodall, G. (2020). COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education*, 81, 623–641. <https://doi.org/10.1007/s10734-020-00561-y>



10

We Close on Friday: A Case Study Pivot to Online Learning and Beyond at a UK Higher Education Institution

David Pike and Jon Rainford

Introduction

‘We need to be fully online from next week, and the University is closing this Friday’. A similar refrain was probably one heard within every Higher Education Institution (HEI) across the UK in March 2020. Traditionally technology has been simultaneously embraced and resisted by academic colleagues (Scherer et al., 2019). Where technology had previously played a supporting factor in students’ learning experiences in March 2020 it suddenly became the primary focus of efforts to maintain learning and teaching. Within this case study, we explore how the University of Bedfordshire in the UK transitioned through an emergency pivot to online learning, with a subsequent major change to the University’s Virtual Learning Environment (VLE). Our approach is innovative for

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two reasons: firstly, owing to the unusual size of the support team; which led to the methodology we utilised for the initial transition to online learning; secondly, modelling and developing a new way to implement Virtual Learning Environment change. Our evaluation is focused upon a subset of colleagues from the University's teaching faculties and student-facing support teams. We examine their experiences of changes implemented as a result of COVID led by us and at an institutional level.

This case study is comprised of three phases:

1. Phase 1 (reflection-in-action—Schön, 1991)—The authors' initial reaction to the COVID crisis; identifying and defining the key challenges for the organisation to move online rapidly.
2. Phase 2 (reflection-on-action—Schön, 1991)—Contextually effective change, considerations made initial phase of the COVID lockdown in the UK; the process of developing and informing change, and reflecting upon ways to support colleagues further
3. Phase 3 (reflection-on-action—Schön, 1991)—Moving forward to a new digital reality; evaluating change and supporting colleagues to optimise their digital learning practice and students' learning experiences.

The University took a centralised approach to change and so much of the policy and procedure initially developed sought to standardise colleagues' approaches, but we as authors were mindful of the potential to utilise the colleagues' expertise and the opportunity to utilise colleagues' autonomy to maintain and deliver learning. We borrowed from the ideas of Bercovitz and Feldman (2008) and Beckman and Cherwitz (2009) notion of academic entrepreneurship. By doing so we placed a focus upon colleagues' abilities and opportunities to innovate, and to form an online community for peer and self-support. Rather than focusing upon eventual commercial considerations (Bercovitz & Feldman, 2008), or working with an external community (Beckman & Cherwitz, 2009) our interpretation operates within the scope of our immediate academic community. We felt this to be a necessary catalyst for change.

A Brief Overview of the Institution

The University of Bedfordshire is a multi-site provider located in the East of England. It has two large campuses in Luton and Bedford. This is supplemented by provision also being provided in smaller study centres in Aylesbury, Milton Keynes, London, and Birmingham. In addition, the University works with partners nationally and all were impacted by the need to move online in different ways. As the University is a widening participation provider our student demographic represents a challenge for online delivery. Our experience is echoed by a recent Office for Students report (Barber, 2021) which describes the challenges of students' limited access to technology and opportunities to study. Our student community for our main campuses is also heavily comprised of local and commuter students. Consequently, our approach to the use of technology needed to be accessible to all students and be available at all times where a balance could be attained amongst the complexities of life and study. Our students are supported by 530 full-time equivalent academic staff and a similar number of professional services colleagues. At the start of the COVID crisis, the team supporting the Virtual Learning Environment consisted of 1.5 full-time equivalent staff.

Phase 1: Initial Reaction to the COVID Crisis

In this section, utilising Schön's (1991) reflection-in-action, we explore our initial reactions to learning that we would move online, how we used our knowledge and experience of technology and online learning implementations, and the immediate steps we took to implement change.

Like many institutions, before the pandemic, the Virtual Learning Environment (Blackboard Learn 9.1) was primarily used as a repository for documents with limited online pedagogic practice. Our Virtual Learning Environment usage was focused upon minimum acceptable standards (Jackson & Fearon, 2014; Reed & Watmough, 2015) with the intention that our activities would enhance NSS (National Student Survey; NSS, 2021) and unit-level outcomes. With the sudden arrival of

the pandemic, we could not solely rely on rules focused upon Virtual Learning Environment and learning and teaching standardisation—the pedagogy for online learning and student engagement is quite different. The purpose of our Virtual Learning Environment was no longer as a supplement to learning but became the primary vehicle for learning.

We set ourselves the goal of quickly transitioning to a model of online delivery that supported learning, teaching, and assessment which colleagues could quickly adopt and adapt. We focussed on delivering solutions by answering three key questions for colleagues:

- a. What is the University's policy on online learning and what do I need to do immediately?
- b. What practices could and should I adopt?
- c. How can I manage the transition to support my students to learn online?

In considering these questions we took into account that colleagues would likely be overwhelmed by the support needs of students during a period of heightened global anxiety, their own personal circumstances, and their overstretched workloads that existed before the pandemic.

Phase 2: Contextually Effective Change— Our Considerations

In this phase we moved from Schön's (1991) reflection-in-action to reflection-on-action. In the early stages of the COVID crisis, our immediate response was to translate University policy into practical support for developing effective pedagogies that met institutional policy intentions. Once colleagues' approaches had time to bed in with students, and policies and methods of working had become established we were able to switch our approach from reflection-in-action (acting immediately) to reflection-on-action (reconsidering the situation and thinking forward) approach. Our approach allowed us to model the type of change that we wanted academic colleagues to adopt, showing them it in practice as

opposed to telling them what to do. Specifically, an interactive online community was provided in addition to our standardised support service.

Groups such as ALT (Association for Learning Technology), JISC (Joint Information Systems Committee), and BlackBoard (the University's Virtual Learning Environment provider) published a considerable amount of advice and guidance (e.g. BlackBoard's (BlackBoard, 2020) scaling teaching and learning advice: BlackBoard, 2020) and practitioners in social media spaces such as Twitter offered a plethora of examples of practice that could be adopted. However, not all of this practice was appropriate to our context as it was contrary to the policy decisions of the University. For example, the standard tool for online teaching was Collaborate rather than Microsoft Teams. We found external examples also made assumptions of skill, resources, and time from both a staff and student perspective that did not meet the needs of our institution.

Given the changing nature of the COVID pandemic activities were reactive and often tools-focused with a desire to experiment to find the most appropriate tools to provide continuity for students' learning—we considered this to be at the expense of consistency. As authors our own online learning experiences (learning, delivery, and development) also made us aware that a tools-focused approach often lacked effective supporting theories of implementation (Oliver & Trigwell, 2005). Our approach was to curate a Community of Practice where we could offer colleagues an opportunity to seek advice and to engage with distilled examples of practice they could adopt. The community iteratively developed in three stages:

- firstly, specific advice for immediate and mid-term change. This was both text-based and involved short, recorded technology guides that mirrored the language of the University's policies and was repurposed from existing content.
- secondly, direction for effective changes for colleagues' own contexts (e.g. assessment and teaching) curated from sector good practice.
- thirdly, to place colleagues in a position to utilise their subject-level expertise to develop students' online learning experiences through live, office hour drop-in sessions and asynchronous discussion boards. Our

intended ethos was to develop an approach that was managing change *with* colleagues as opposed to imposing change.

What was the Rationale for a Community Approach?

We considered the possibility of making additions to our fixed Virtual Learning Environment standards (Jackson & Fearon, 2014; Reed & Watmough, 2015)—the method would be consistent with the position that we could maintain course outcomes (e.g. in the National Student Survey), but we decided in the midst of a fast-changing environment that providing a central single source of support and guidance would help support colleagues. We also anticipated that an online community would provide a regular opportunity to interact with us and other staff colleagues with the intention of sharing and developing innovative practice.

In working to introduce relevant examples that had resonance for our institutional context, we set out opportunities for colleagues to ask questions publicly and privately. The key for us was evangelising and instilling confidence in our staff colleagues so they could achieve their individual pedagogic goals. The focus of the content and support provided shifted over time, moving from a focus upon content creation, moving towards improving student engagement, and finally towards adapting to assessment and feedback processes.

Our intention and aspiration were that modelling good practice would install confidence in colleagues and would allow us to lead change rather than enforce and manage change. However, many colleagues did not engage and continued to focus upon live synchronous sessions. This meant instead of providing a truly transformative online learning experience with tasks and activities—colleagues and students utilised an approach that was focused upon delivering an online equivalent of classroom-based activities. This was a transfer of pedagogy rather than a transformation.

Phase 3: Moving Forward to a New Digital Reality

In this section we continue with the theme of Schön's reflection-on-action, and we focus upon our efforts to take the pedagogical lessons learned in phases 1 and 2 and apply them to the Virtual Learning Environment transition we undertook in the latter part of the second UK-wide lockdown (December 2020). On reflection the combination of major pedagogic and Virtual Learning Environment change was a bold decision, but we believed that our efforts would lead to an improved online learning experience for both staff and students.

Evaluation

In developing an evaluation for this unprecedented change, we wanted to consider how different disciplines and pedagogical practices aligned with a COVID-impacted way of working. We invited academic and support staff to participate in focus groups with a total of 36 spread across 6 focus groups (academic staff $n = 23$ and support staff $n = 15$). Participants came from three of the University's faculties (Business, Health—ten participants, Social Science—ten participants, and Creative Arts and Technologies—three participants); support staff participants were those who directly involved in the support of students online (Student Information Desk—two participants, Professional and Academic Development—six participants, and Learning Resources—seven participants). Participant groups (but not the participants) were selected purposefully (Cohen et al., 2007) to ensure adequate coverage of both academic and support services impacted by COVID-19.

Ethical approval was gained from the University's Institute for Research Applicable Computing (IRAC) and we conducted focus groups online following the BERA Ethical guidelines (BERA, 2018). Invitations to participate were made at an institutional level via the University's Virtual Learning Environment and via email invitations sent to faculties. Once colleagues had indicated an interest in participating the authors provided

each participant with a Participant Information Sheet which detailed the nature, purpose, and publishing outcomes of the research. Interviews were conducted in groups of a maximum of 10 participants to ensure that colleagues had an opportunity to participate.

During these focus groups we discussed the nature of colleagues' experiences during the COVID crisis. Each focus group was conducted, transcribed, and anonymised by one of the authors using Microsoft Teams. The resultant transcripts were coded using a thematic analysis approach (Braun & Clarke, 2006). Themes were independently identified through iterative reading of the transcripts which were then discussed between the two coders.

When analysing the data from the focus groups, we also examined our own personal communications over the period of the change we implemented utilising a form of auto-ethnographic commentary (Holman-Jones, 2005). We wanted to ensure we had developed a sense of how our own attitudes and approaches changed over time, and how this impacted our decision-making.

Themes Emerging from Our Evaluation

The analysis highlighted five high-level themes which describe the experiences of our participants. Each is listed with supporting material from the focus group interviews.

Confidence: With Online Learning and Technology

The COVID pandemic presented a seismic challenge for colleagues, and this became clear in some of the comments surrounding the pivot to online learning and our own Virtual Learning Environment change. "I think it was fortunate because I was teaching a unit semester one, but it was a very small unit, so I was able to kind of it as a learning experience with the students" (Focus Group A). Staff who worked in roles supporting students' learning (Focus Group D) explained they found two key types of difficulty when dealing with students' confidence: "Some of their

[students] computer skills are very poor” and they spoke of students “not being able to handle technology”, with online lectures students “don’t know what they are supposed to be doing” and “they [the students] don’t know what is expected of them”. It is arguable that students often have difficulties of connection and understanding, but the pandemic would have forced previously connected students into isolation. Even if students could support each other, there was the difficulty of accessing learning. Teaching colleagues from Focus Group C focused their concerns of students’ having the right technology “A lot of the students struggle because they didn’t have very good equipment” and using technology to evidence attendance and “avoiding the [institutional] paranoia of those students who didn’t turn up. We want to trace, record, etc.”. These examples speak to the preparedness of students and of the need for the University to monitor and ensure students where engaging with their learning. A lack of equipment or the wrong type of equipment would not only prevent students from learning, but in students and staff colleagues’ initial attempts to engage it may leave a lasting negative impression.

Communication: From Us as the Authors and Cascaded Institutionally from Senior Managers

During our journey communication and engaging with stakeholders, but a key problem endured; the issue of communicating change. From the focus group participants, it was evident that despite numerous communications about the introduction of Blackboard Ultra, its release was a shock to them. In some cases, there was an absence of communication through their faculty management structure however in others it was about overload. The sheer volume of communications about policy and procedural changes over the preceding months meant that often messages were ignored or unread. Focus group B described this in terms of unexpected magnitude: “No one said this sort of change had this sort of magnitude...” and “we would have approached the training materials differently”—there was a significant difference between “upgrade” and what was seen as a “new” product. Focus group C critiqued the lack of a “clear plan of communication as to what’s coming and why it is coming”,

and indicated the need to demonstrate piloting amongst staff and students. Despite the support provided staff felt this was mostly experienced “post-hoc” (Focus Group B) and often in response to problems rather than enhancing learning experiences. Communication is key, but there is an inherent overloading of resources needed to ensure all mediums and channels are covered. It does raise an important question about how best to engage with both staff and student groups.

Change: How It is Managed and Experienced

Despite three months of messaging, staff were unaware of the changes, putting them back into crisis mode as semester 1 began: panicked, reactive, and unable to adopt a reflective pedagogy first approach to its implementation. This challenge, we contend, is not unique to the pandemic, although exasperated by it. It speaks to the wider issues of workload and expectations of the already stretched staff. This resulted in what focus group c described as “a perfect storm”. This volume of information, only served to create more pressure on the time-poor staff resulted in prioritisation meaning that communications seen as peripheral to their immediate concerns were likely to be ignored. Focus group C expressed indicated that a rationale would be more helpful than simply directing change “there have been examples in the past where a change has been made” and “why are we doing this way, and what might work best in terms of teaching and learning?”. Following on from this comment participants also indicated the problem of assuming success in one department is generalisable to a different group: “the answer is: yes, it was done in [x subject] in Polhill [Bedford]”. The comments made by our participants suggested that change was enforced rather than agreed. However, we did consider that colleagues had missed an earlier opportunity to engage with our communications and the difficulties resulted from missed opportunities for connections.

Workload Demands: With the Change to Online Learning and Supporting Students

In hindsight our approach should have taken into the account the difficulty that some units run in multiple locations. We envisaged that staff would give themselves enough time to experiment or work with existing units. Participants in group A described two problems: the inability to experiment or take risks when you have “hundreds of students on an undergrad unit” and the resultant inconsistency in departments and “Students were getting differential [and] inconsistent experiences with their [Virtual Learning Environment] engagement”. In this specific focus group’s case units run in multiple physical locations (in many cases over 15) and repeatedly in short form with some units repeating six times in one academic year. Focus Group D highlighted the problem of getting used to using technology to make recorded sessions engaging, but “it always took like twice the amount of time it was going to”, but that teaching staff tended to create “an hour and half or two hours of Panopto [recordings]”. Moving to online learning created difficulties for both teaching staff and those who engage students with study skills. Staff came under pressure to provide a continuity of learning, but equally to transition and change their practice to continue to engage students. Invariably with larger cohorts and distributed cohorts, there is a need for scalable change, and this placed teaching staff in a difficult position as they had to find answers and then distribute their solution rapidly.

Systematic Difficulties: Software and Institution Processes

For teaching staff difficulties stemmed from changes to tools commonly used in older versions of the Virtual Learning Environment: “you can’t have an online journal if it’s more than 50 people and you can’t have an assessed online journal” (Focus Group B). Emphasis was being placed on the name of the tool rather than the functions it provided—an assignment with a link available for students to upload content would have sufficed. The pedagogical benefit of tools such as weekly quizzes in some

cases was perceived as superfluous, and in some cases to question “the target market of the product [BlackBoard]”, and functions such as “attendance, quick tests and not the sort of functionality you need when you are teaching a Masters class” (focus group B). Colleagues had become used to viewing data related to students’ virtual presence and this was taken to be an adequate method to clarify that students had engaged. As Muller (2018, p. 177) questions: “how useful is the information?”—presence is not engagement. Subsequently, whilst the notion of measuring presence satisfies colleagues that students are “attending” it cannot evidence the level to which students are gaining value from such activities. Though not highlighted by teaching staff, staff colleagues supporting students identified accessibility as a difficulty when working with online resources during lockdown and that the situation meant accessibility “even more amplified that everything has to be [accessible]” (Focus Group D). The development of accessible materials was naturally a priority for academic colleagues but required systematic effort. Parts of the newer Virtual Learning Environment automatically provided positive change and adjustments. However, colleagues placed emphasis on determining functional change within the VLE.

Doing Change to or with Colleagues?

Hindsight is a powerful tool, and where colleagues felt more challenged by change, it was generally accompanied by a conception that they had not been privy to the changes before they were imposed at the start of the COVID crisis and leading into our Virtual Learning Environment development. Change was being done to, rather than in concert with colleagues. It highlights issues of communication and dissemination from higher management to the front-line staff. Colleagues’ focus was upon maintaining a continuity of teaching in the context of overstretched capacity within a pandemic allowing less time and space to think about systematic change. Even with the extensive resources, FAQs, video tutorials, and virtual tutorials, reactive approaches to challenges often lead to a crisis mentality leading. Therefore, despite building communities for supporting staff, there was still a huge demand for individualised support

resulting in emails or calls to our support team, often outside of the traditional office hours.

Ultimately, whilst our goal was to develop a collaborative and supportive approach to managing large-scale change with limited human resource, the data from our focus groups indicated that symbolic change (Bercovitz & Feldman, 2008) was more evident than substantive change. Colleagues attempted to replicate and relocate (to a different medium of delivery) their pedagogies and approaches they used in class. In some cases, colleagues transferred pedagogy rather than taking advantage of new features of the new Virtual Learning Environment. The driver for this was partly an institutional mandate for asynchronous learning in the first national lockdown.

Scholarship on Long-term Impacts and Recommendations

Much of this case study has focused on the necessary. We simply had no choice when the pandemic arrived—technology was the only medium available. However, there are elements of practice that staff have felt were preferable to more traditional face-to-face modes. For example, our staff have valued and adapted to the efficiencies that providing one-to-one and group online communication brings, especially online live document editing and the reduction of travel for both staff and students. Consequently, institutional conversations surrounding teaching and learning have begun to focus on what elements of this emergency mode should become part of the business of usual. This of course assumes that the nature of learning and teaching will be back to “normal” in late 2021. Regardless of what the “new normal” looks like, our experiences and findings lead us to recommend the development of more experiential modes of training, engagement, and ongoing support to facilitate colleagues’ pedagogic goals. We acknowledge that the needs of colleagues are likely to be diverse, heterogeneous, and dynamic as student, sector, and workplace expectations evolve. Rapid change created the conditions for more rapid, experimental approaches to teaching and learning which can often

be less possible within prior academic frameworks. We make three recommendations.

Firstly, a need to develop a flexible and investigative approach to developing online pedagogies. This is where we believe the concept of developing entrepreneurship (Bercovitz & Feldman, 2008; Beckman & Cherwitz, 2009) might present significant utility in thinking more flexibly about pedagogy. In the event that a similar effort would be attempted in another institution, our advice would be to start earlier and to place emphasis upon reporting and feedback to encourage engagement.

Secondly, ongoing change and improvement need to be carefully managed and evaluated. Communication and understanding alongside effective support are vital to enable colleagues to develop confidence and competence with digital technologies. For staff to buy in to change, they need to feel like they are active participants and not the passive recipients. Whilst for some change will always be a source of discomfort, our recommendation is that an early and coordinated collaborative effort would assist with adoption. It is a reflection of our method of adoption due to the speed of our transition both to online learning and the changes to our Virtual Learning Environment. For us this would lead the University in adopting theory-based led approaches. This could include greater integration of student surveys at course and unit level that allow for better understanding of what works (or indeed what does not work) about varied modes of delivery. However, it should reach beyond satisfaction-based measures and involve scholarship on teaching and learning and reflection upon practice to understand the impact of these changes on teaching and learning. This could include existing mechanisms such as Advance HE fellowship applications but also through creating ongoing time and space for colleagues to share practice and to continue to support each the use of digital learning within their own subjects.

Finally, one of the most significant issues that needs to be engaged with by the institution and more widely in the sector: the workload involved in digital learning. Within the emergency mode of online learning, staff were expected to accommodate the extra work to take learning online within existing workload models. This often meant the de-prioritisation of other key elements of their role such as research. We can also see from this case that a lot of the change happened due to a lot of extended

working days, resilience and enthusiasm of staff, and a crisis management mentality. One year on, we are seeing some of the goodwill slipping away. Moreover, this approach fails to acknowledge the labour needed to develop high-quality teaching and learning in this mode. Pushing staff beyond manageable workloads is not a sustainable model and if digital learning is to play an increasing role in higher education going forward, staff need to be given the time to properly develop their digital literacies, reflect upon their approaches and develop pedagogically led materials. This requires rethinking the workload planning assumptions of academic staff, and investment of time and resources to do effectively. It also requires frank and honest conversations about the need for expert learning technologists and IT support staff to develop and support the workforce long-term. We cannot rely solely on a “make do and mend” strategy that allowed us to ride out the storm.

References

- Barber, M. (2021). *Gravity assist: Propelling higher education towards a brighter future – Office for Students*. [Online] [Officeforstudents.org.uk](https://www.officeforstudents.org.uk). Retrieved March 3, 2021, from <https://www.officeforstudents.org.uk/publications/gravity-assist-propelling-higher-education-towards-a-brighter-future/>
- Beckman, G. D., & Cherwitz, R. A. (2009). Intellectual entrepreneurship: An authentic foundation for higher education reform: Our relationship with the traditions and purpose of a humanistic education, it appears, are at odds with the career environment most students inhabit after graduation. *Planning for Higher Education*, 37(4), 27+.
- BERA. (2018). *Ethical guidelines for educational research, fourth edition*. Retrieved February 22, 2021, from <https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018-online>
- Bercovitz, J., & Feldman, M. (2008). Academic entrepreneurs: Organizational change at the individual level. *Organization Science*, 19(1), 69–89. <https://doi.org/10.1287/orsc.1070.0295>
- Blackboard. (2020). *Scaling teaching and learning online in response to COVID-19* | Blackboard. [Online]. Retrieved April 22, 2022, from <https://www.blackboard.com/go/scale-teaching-and-learning-online>

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge.
- Holman-Jones, S. (2005). Autoethnography: Making the personal political. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed., pp. 763–791). Sage.
- Jackson, S., & Fearon, C. (2014). Exploring the role and influence of expectations in achieving Virtual Learning Environment benefit success. *British Journal of Educational Technology*, 45(2), 245–259. <https://doi.org/10.1111/bjet.12029>
- Muller, J. (2018). *The tyranny of metrics* (p. 117). Princeton University Press.
- National Student Survey. (2021). *National student survey*. [Online]. Retrieved March 18, 2021, <https://www.thestudentsurvey.com/>.
- Oliver, M., & Trigwell, K. (2005). Can ‘blended learning’ be redeemed? *E-learning and Digital Media*, 2(1), 17–26.
- Peer Assisted Learning | University of Bedfordshire. [Online]. Retrieved March 18, 2021, <https://www.beds.ac.uk/pal/>
- Reed, P., & Watmough, S. (2015). Hygiene factors: Using Virtual Learning Environment minimum standards to avoid student dissatisfaction. *E-Learning and Digital Media*, 12(1), 68–89.
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers’ adoption of digital technology in education. *Computers & Education*, 128, 13–35.
- Schön, D. (1991). *The reflective turn: Case studies in and on educational practice*. Teachers Press, Columbia University.



11

Exploring Perceptions of Social Presence among Researching Professionals

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Introduction

In March 2020 the UK Government responded to the COVID-19 pandemic by instituting a national lockdown. A year later, the impact on our personal and professional lives has been profound.

For those studying for a professional doctorate, the pandemic's impact has been three-fold. Firstly, Professional Doctorate researchers have been unable to attend lectures, seminars, and residential schools on campus. Secondly, the overnight pivot to working from home or increased pressures on health services while home-schooling and/or looking after relatives has meant their professional workloads intensified at a time when their personal life was in upheaval. Thirdly, the context of their research altered. Data collection had to be abandoned or recalibrated to suit online methods, while the organisational context of their research—e.g. health

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organisations, social care settings, or educational institutions—was either closed or caught up in managing the pandemic.

In this case study of the Professional Doctorate programme at the Open University managing the pandemic, we focus on the first type of impact: social distancing restrictions preventing Professional Doctorate researchers from meeting face-to-face. We examine the ways the Programme Leaders reconfigured the Professional Doctorate programme to develop opportunities for *social presence*, that is opportunities for individuals to demonstrate their state of being in a virtual environment, signalling their availability for interpersonal transactions (Kehrwald & Oztok, 2016). For this reason, we focussed on the cohort who started their doctorate in October 2020, amidst the pandemic. Using an online questionnaire and focus group discussion (FGD) we explored their perceptions of social presence.

Contextual Background

The Professional Doctorate Programmes at the Open University

The Open University offers two Professional Doctorates, one in Education (EdD) and one in Health and Social Care (DHSC). These part-time sister programmes are typically undertaken by established professionals who, often working full-time, research their own practice. The blended programmes are structured into two stages and integrate online learning, supervision, and an annual face-to-face residential weekend. Stage 1 (years 1 and 2) consists of nine self-study modules, and Stage 2 (years 3+) comprises a supervised research project, the submission of a thesis, and viva voce examination.

Defining Social Presence

Social presence theory explores and explains the social aspects of online learning. While there is contestation around precisely how it is best

defined, it is beyond the scope of this chapter to explore its multiple meanings. We view social presence in close relation to interpersonal interaction, emphasised by individuals having the *ability* to send and interpret social presence signals, the *opportunity* to interact socially, and the *motivation*—the need for and interest in—for relational exchanges (Kehrwald & Oztok, 2016).

Enhancing Social Presence during the Pandemic

The Professional Doctorate programme's online pivot was supported by an institution with more than 50 years' experience in digital learning. Predicated on personalised study patterns, flexibility is one of our core pedagogic values. Students have the option of up to two years of study breaks to manage the unexpected. We did not anticipate the pandemic causing major disruption to the programme. Nonetheless, with the confinement brought by the pandemic, as a short-term intervention, Programme Leaders introduced a series of fortnightly Saturday morning drop-in support sessions for these researching professionals. We explored managing study during the lockdown, well-being, online data collection, and writing COVID-19 into your thesis (Dennis & Waterhouse, 2020). At the end of our four-planned sessions, we were surprised to find that students expressed a desire for the meetings to continue. Aware that the uncertainty of upheaval had the potential to engender feelings of isolation and loneliness, poor performance, and drop out (Di Malta et al., 2022), we established monthly student-led seminars which allowed for cross-cohort interactions.

While social presence is rightly understood as working dynamically with teaching (what teachers do to structure the learning) and cognitive presence (selection of learning content) (Nolan-Grant, 2019), we note with interest that student-led seminars have leaned away from cognitive material towards biographical accounts of doctoral study. Rather than presenting their research, students have foregrounded personal experiences. These biographies are a mutual signal of students' state of being and their availability for interpersonal transactions. They underlined the importance of ensuring that, in transitioning our October induction to

an online format, we provided ample opportunities for the new cohort of doctoral researchers to establish social presence: being real, available, and there.

There were several pedagogical challenges associated with this adaptation. The online environment offered fewer opportunities for corridor conversation. Nor are systems, tools, and platforms universally familiar or accessible. We adopted a synchronous flipped approach to sessions (Zheng et al., 2020) maximising time available for discussion and collaboration. Before the event, we sent students an induction pack which included MP4 recorded orientations to their year of study and website tours. Students made themselves known to each other; an important part of establishing social presence (Kehrwald & Oztok, 2016), through their profiles on a digital wall (Padlet). Students, supervisors, and the programme team posted an image, an account of their research, and a brief biography. In addition, we used the social media site Twitter to engender the social presence of the programme team (Weidlick & Bastianens, 2019), this was especially helpful for new students who did not yet have access to the university's communication systems. During the online induction various strategies were used to create a collaborative space and stimulate discussion (Yaun & Kim, 2014). These included a 'Sharing your research' session where students, along with members of the programme team, in small groups clustered by research topics, discussed their professional backgrounds and proposed research topics, a session where students brought in objects which were critically analysed in breakout rooms using a 'study diamond' (Clifton, 2012), while invited guests gave presentations (around academic writing or life after the Professional Doctorate). The weekend culminated with an online pub quiz.

Each year we host four synchronous seminar discussions. Two weeks after the induction residential, during our first seminar, we asked students to reflect on 'developing as a researching professional' prompted by a series of questions and activities. This seminar was notably dominated by affective responses (Rourke et al., 2001). Students shared goals and concerns about starting their doctorate. The October 2020 cohort joined the programme at a point when student-led seminars were firmly established, and the new cohort of students had a platform upon which to interact with students further along in the doctoral journey. The

Professional Doctorate team also fostered greater online engagement with the faculty's PhD programme, creating opportunities for social interaction between two usually disparate groups of doctoral researchers. We have hosted a new year lunch online where participants brought in and shared household objects that represented their research, a faculty online doctoral research conference which included traditional presentations, a well-being drop-in strand and a gallery of creative representations of research and an intensive online writing camp week.

Research Approach

The purpose of the research was to explore perceptions of social presence amongst the 2020 Professional Doctorate cohort at the Open University using a mixed-methods approach. Given the ongoing nature of the pandemic and the uncertainty of future face-to-face encounters, the research aimed to develop activities to improve the programme for new and existing cohorts. After receiving ethical approval from the Open University's Human Research Ethics Committee (HREC/3885/Waterhouse), we used a survey to measure students' perceptions of social presence, and a focus group discussion to enable them to exemplify and explain survey responses.

Online Survey

There were 37 Professional Doctorate students in the 2020 cohort (28 on the EdD; 9 on the DHSC). Over a two-week period in March 2021, they were invited to complete an anonymous 15-minute survey (with both closed and open-ended questions) embedded on the programme's website. 11 students responded.

The closed questions consisted of adapted items from the validated scale of social presence developed by Arbaugh et al. (n.d.) as part of the Community of Inquiry questionnaire. This scale covers three components of social presence: affective expression, open communication, and group cohesion. Respondents answered on a Likert-type scale ranging

from 1 = ‘strongly agree’ to 5 = ‘strongly disagree’. The inclusion of open questions additionally enabled the collection of students’ views in free-text responses. These questions explored what specific programme activities or formal and informal communication spaces enabled students to or prohibited them from establishing and maintaining social presence.

Focus Group Discussion

Given that richness of data derived from text responses to open-ended survey questions is frequently less than information derived from interview or focus group discussion (FGD) (LaDonna et al., 2018), a focus group discussion was held subsequently to investigate the main findings from the survey’s questions in greater depth. The FGD was conducted, transcribed, and anonymised by a researcher outside the Programme team. The discussion covered students’ needs and feelings while studying the Professional Doctorate, preferences and difficulties communicating with peers and supervisors online, and the delivery of the doctoral programme under the circumstances of the COVID-19 pandemic. Five students took part in the FGD.

Structured Responses: The Survey

Table 11.1 displays the responses on the social presence scale. Considering open communication first, the majority of respondents reported comfort with interaction in the online environment. Over 90% reported that they strongly agreed or agreed with the statements relating to feeling comfortable communicating in the online environment, participating in programme discussions, interacting with the programme team and with other doctoral students. Despite this comfort with interacting in the online environment, only 46% saw online communication as an excellent medium for social interaction and only 18% strongly agreed or agreed with the statement ‘I have been able to get to know some of my peers’, with 36% reporting experience of isolation, disconnectedness or loneliness whilst studying for their doctorate.

Table 11.1 Perceptions of social presence of Year 1 OU professional doctorate students ($n = 11$)

	Percentage			Mean score
	Strongly agree or Agree	Neither agree nor disagree	Strongly disagree Strongly agree	
<i>Affective expression</i>				
Getting to know other doctoral students and academics gives me a sense of connection to the programme	45.5	36.3	18.2	2.8
I have been able to get to know some of my peers	18.2	36.3	45.5	3.4
Online communication is an excellent medium for social interaction	45.5	27.3	27.3	2.7
I experienced a sense of isolation, disconnectedness or loneliness whilst studying for my doctorate	36.3	9.1	54.6	3.3
<i>Open Communication</i>				
I feel comfortable communicating in the online environment	91.0	0.0	9.1	1.5
I feel comfortable participating in the programme discussions	91.0	9.1	0.0	1.5
I feel comfortable with other doctoral students	91.0	9.1	0.0	1.6
I feel comfortable interacting with the programme team	100.0	0.0	0.0	1.4
<i>Group cohesion</i>				
I feel comfortable disagreeing with other doctoral students whilst still maintaining a sense of trust	18.2	73.7	9.1	2.9
I feel like my point of view is acknowledged by other doctoral students or academics	45.5	54.5	0.0	2.3
Online discussions help me to develop a sense of collaboration	36.3	45.5	18.2	2.7

Unstructured Responses: Focus Group Discussion and Open Survey Questions

The findings from the qualitative data were analysed using thematic analysis (Braun & Clarke, 2006). Initial codes were generated representing similar phenomena by the lead authors. Codes were then collated into three main themes using a theory-driven approach and discussed and agreed upon by the whole project team. The three themes—ability, opportunity, and motivation—reflect the definition taken of social presence we work with (Kehrwald & Oztok, 2016).

The first theme examines students' ability for engaging in online activities and reveals the importance they attributed to their previous online learning experiences and capacity to navigate virtual environments. The theme of opportunity was the most prominent and exposes four perceived factors affecting personal connections: need for face-to-face encounters, opportunities for more informal small group interaction, personalisation of presence, and lack of time. The third theme captures students' motives for interaction where we found clear evidence of the impact of the pandemic on their willingness to connect online as well as a selective participation in what was felt most relevant. The issues emerging from each theme could be seen as interrelated. Students' digital ability could be affecting their perceptions on what may be possible online as well as their motivation for engaging in virtual spaces. At the same time, lack of time could be impacting the range and length of online activities they wish to engage with. Furthermore, when the professional, the personal, and the learning take place remotely, a reduced motivation to engage online could block opportunities for fruitful exchanges. Overall, for the majority of students, there seems to be a sense of disconnection online and a desire for the replication of the real in the virtual with respect to social presence.

Theme 1: Ability

This theme is related to students' ability to engage within the online environment during the first year of the Professional Doctorate programme. Two main aspects were highlighted.

Respondents suggested that their capacity to interact with others was attributable to their previous experiences. Some students reported that they were familiar with communicating via Teams or Zoom in their professional roles, whilst others also highlighted that they had studied previously with the Open University, and so had the experience of using online forums. Forums were appreciated because they enabled students working in different time zones to contribute. They also encouraged careful, thoughtful contributions:

I think it allows you in writing to put your views forward in perhaps a more considered way, but you have to think about what you're going to write, so that might be an advantage. (Focus group discussion participant)

On the other hand, a small number of students felt they did not have the knowledge needed to meaningfully interact with others on the programme. For some this related to a lack of awareness of the different activities taking place, whilst for others they felt they did not have sufficient information to make decisions about which events to attend:

Also, I'm not really sure what to get involved in, so there's various things that have been suggested through the Prof Doc. There's a Tuesday evening and a Thursday 11.00 o'clock but [I don't really know] what to prioritise. Or what would be the best and how to best use one's time. Because there is a time limit. And I think that we were introduced to all these things, but not really helped along the way or given the next step in the journey somehow. And so, as a result I haven't really done a great deal. (Focus group discussion participant)

Navigating online learning environments could be stressful, especially as a range of online spaces were used to organise events by the Professional Doctorate programme team, the faculty, and the Graduate School. Not all students had the ability to navigate the virtual environments needed to access events and resources:

I did actually try and join (GS [Graduate School] coffee morning) a couple of weeks ago, but I couldn't get into it. So, I then emailed and the reply was that I needed to be let in. There was another way and there was something

else had to be done before I could get in so it's more complicated than just...so that was it then, I didn't join that week and I haven't had chance.
(Focus group discussion participant)

Theme 2: Opportunities

Opportunities are related to contextual factors that enhance or inhibit students getting to know each other on the programme. Four aspects emerged.

Firstly, lack of face-to-face interaction. Most students felt the cancellation of the face-to-face induction due to COVID-19 prevented them from developing supportive peer groups:

I think that weekend that we did online, if we'd been able to do face to face we [would] have made friends, in inverted commas, or you'd buddied up with people in a natural way because organically you do that when you're face to face. And you get a choice of somehow it works out and then you would have had a little group; maybe you could have followed through, or at least one person. (Focus group discussion participant)

In contrast, one research participant emphasised her preference for a wholly remote learning experience. This brings into sharp relief the extent to which online events remove the stress of travelling to campus and thus enhances the opportunity for social interaction:

The activities [for the induction] were moved online and actually this suited me. When interacting with colleagues and fellow students online I was relaxed and happy rather than exhausted and uncomfortable [after] a physical journey [...]. Everything was much better during the pandemic regarding interactions. (Questionnaire respondent)

Secondly, a major topic in the FGD data was the nature of interaction. There was a sense that the opportunities for interaction offered by the Professional Doctorate programme were structured and formal. Whilst students felt these sessions were useful in terms of cognitive development,

they did not see them as offering opportunities to develop a sense of belonging:

The forum discussions are useful but fairly cold and objective. There is no sense of reaching out to people and feeling supported here. When putting something for the whole cohort to read, especially when you don't know them, I don't feel comfortable letting my guard down in any way. (Focus group discussion participant)

Most students highlighted positively programme activities that had allowed them to interact in small groups enabling them to get to know their peers. There was frequent reference to the 'Sharing your research' session offered during induction. In fact, our induction evaluation identified this session as the one from which students gained the most. Having a fellow traveller on the doctoral journey seems important. One student described the impact of a newly created study buddy system:

They said 'we're thinking of doing some study buddies' and I thought anything, just to talk to someone and just to have someone to talk to. And then [named student] and I just got paired up. [...] that's been really nice. We are doing different topics, but it was just nice to [...] share top tips between us and going 'Ah'. [...] Also, we've had some wins as well, you know. (Focus group discussion participant)

Research participants repeatedly expressed a desire for more small group activities, while highlighting the tension between formality and structure:

Would I have liked to have more contact with people? Yes, that would have been good ... but I wouldn't want it to be a formal space so you could take out that worry about sounding academic enough. [...] So, it's a space where you could just go and say I haven't a clue what I'm doing here. Has anyone got any ideas about, you know that sort of space, but with a structure so it doesn't turn into a moan fest for half an hour or whatever. (Focus group discussion participant)

Thirdly, an absence of the visual was felt. Postgraduate researchers are social beings, whatever your mode of learning, being seen and being able to see matters. The acquisition of knowledge is a necessary but insufficient aspect of achieving goals which are only accomplished through emotional engagement (Busteed, 2019). It is therefore unsurprising that participants highlighted the lack of ‘faces’ in the online environment as inhibiting their capacity for getting to know others. The absence of a face makes connection difficult—as this participant explains:

[I like to] have pictures as I often see folks on Teams except if they come in as a guest with no picture even so not everyone has their camera on. The padlet at the beginning of year one was a really good idea as I felt I could see and read about tutors, peers, etc. (Focus group discussion participant)

Similarly, in written forum discussions, when people did not set up their profiles, or added their picture to their profiles, there was a sense of an absence of others, of them being not fully there, a feeling of disconnection:

I like the [asynchronous forum] seminars and feel a link when I read and type in them, but without faces to names the people feel very distanced. (Focus group discussion participant)

A fourth aspect mentioned was time. Researching professionals working full-time and studying for 18.5 hours per week lead complex lives with multiple and competing calls on their time. COVID-19 exacerbated what many already felt was time and effort intense, stressful, pressed, and lacking in breathing space. Most participants reported that family and work demands prevented them from attending seminars and social events. This, for some, meant they had to be strategic in what activities they engaged with:

[...] it’s time. [...] I am short of time. Doing the job that we’re all doing in the middle of a pandemic has been difficult [...] I don’t even think it’s time, it’s brain space. [...] I’ve got teenagers at home as well. [...] So I’ve

cut down strategically to the absolute bare minimum of what I need to do.
(Focus group discussion participant)

Theme 3: Motivation

This theme related to the extent to which the PD programme provided the need for or an interest in students expending limited time and effort on relational exchanges. The issue is whether there are specific tasks requiring relational exchanges which deepen relationships. Two points were raised in relation to this.

One was screen time. The pandemic affected students' willingness to interact socially online. For some, their professional roles required hours in front of a computer. Even if events were accepted as valuable for their studies more 'screen time' made them unappealing:

I'm on [...] Zoom all day. It's just, it's just too much. I saw on Twitter over the weekend that some people were talking about the writing weekend and my supervisor was involved in running it and I would have liked to have done it and I've heard great things about it, but I was just like 'no!?' (Focus group discussion participant)

The other point was about the perceived relevance of events. For some the time demands of spending too much time on the computer, combined with a perceived lack of relevance or usefulness of organised sessions resulted in nonattendance. It was reported that sessions with a large group of students did not appear to have the potential for comfortable communication with others:

I haven't really attended some of the things that are available, but I think if it was something that I was going to [offer] emotional support [...] it would get it into my diary, but the groups would have to be a size to feel comfortable for people to be open. You don't want 30 people in it. (Focus group discussion participant)

For others, the research topics of peers in their cohort were not relevant to their own interests and therefore affected their attendance to

sessions. Instead, some students placed greater value on cross-cohort interaction, rather than within-cohort interactions, due to the sense of belonging they felt in groups with similar research interests.

Scholarship on Long-term Impacts

The impact of the move of our residential weekend online will last considerably longer than the COVID-19 pandemic. Context is key in evaluating learning points from this case. Pedagogies are situationally contingent, embedded, and enacted within specific environments (Bayne et al., 2020). The Open University has more than 50 years' experience in distance learning. Our online pivot brought us into line with the University's default mode. Technical support and practical advice were close to hand and with some decisions we had only to follow agreed institutional protocols.

Taking social presence as our conceptual guide, our final reflections are organised within its three ongoing conditions.

Ability

- i) Digital pedagogies require more than simply transferring face-to-face delivery into their online equivalence. The significance of this may well have been lost in the speed with which transformations were made. In selecting modes of learning students need for social presence is as important as a cognitive challenge.
- ii) It is possible to both build and bridge meaningful encounters online which embeds personalised flexibility and enables more carefully considered interactions. Online learning need not be equated with a less personable learning approach.
- iii) The ubiquity of online platforms ensures that Professional Doctorate researchers come to the online pedagogic encounter with the experience of digitally mediated communication which can be drawn upon to shape platform choice and use.

Opportunities

- i) Interpersonal interaction is a necessary component of social presence. Given constraints on time and energy opportunities, successful interpersonal interaction is greatly a matter of programme design.
- ii) Opportunities for online interaction will not resonate with all students. Professional Doctorate researchers will need guidance on what to prioritise.
- iii) Bandwidth limitations mean it is not always possible to have cameras on during seminars. But a face attached to a name, research profile, and biography can be made possible through platforms that run parallel to the programme. The Professional Doctorate learning journey is enjoyable and successful when fellow travellers are experienced as ‘real’ and ‘there’.

Motivation

- i) Not all students identify interpersonal contact as important to their learning journey, but if learning is understood as a combination of the social, the emotional and the cognitive (Illeris, 2003) a successful online programme needs to incorporate interpersonal interaction as a core necessity.
- ii) Social presence need not add to screen fatigue; it can be encouraged through online profiles, study buddies, and writing groups.
- iii) Relationship building is a core rather than optional activity, programme design could include varied tasks and opportunities from whole group to paired or small group interaction.

Conclusion

This study provides a cautionary reminder for colleagues who—driven by the immediacy of COVID-19—found pedagogic solutions that were exclusively technological. The urgency of simply keeping programmes running understandably obscured all other considerations. More than 12 months into the pandemic, defined by successive waves of infection and

the continued presence of a virus we may yet learn to live with rather than overcome, the importance of creating critical friendships, achieving open communications, and engendering peer-to-peer support has been brought into sharp relief. This chapter evidences the importance of pedagogic relationships that extend beyond supervisor/supervised, mentor/mentee suggesting social presence as a necessary corrective to an exclusively technological approach to managing learning in lockdown. But our horizons are inevitably short term. The extent to which programmes, having made a successful pivot to online learning make the more graceful pirouette to developing online learning communities (Adams & Jeter, 2021) remains open to empirical exploration.

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References

- Adams, A., & Jeter, G. (2021). Creating community in EdD programs during COVID-19: Challenges, strategies, and opportunities. *Impacting Education: Journal on Transforming Professional Practice*, 6(2), 1–4. <https://doi.org/10.5195/ie.2021.161>
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, G.R., Ice, P., Richardson, J. C., & Swan, K. P. (n.d.). *Community of inquiry survey instrument*. <http://thecommunityofinquiry.org/coi>
- Bayne, S., Evans, P., Ewins, R., Knox, J., Lamb, J., MacLoed, H., O’Shea, C., Ross, J., Sheaol, P., & Sinclair, C. (2020). *The manifesto for teaching online*. MIT Press.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Busteed, B. (2019). *A Nobel Laureate’s mind-blowing perspective on the ultimate outcome of an education*. <https://www.forbes.com/sites/brandonbusteed/2019/12/23/a-nobel-laureates-mind-blowing-perspective-on-the-ultimate-outcome-of-an-education/?sh=6c468baf6cd5> Laureate’s Mind-Blowing Perspective On The Ultimate Outcome Of An Education (forbes.com)

- Clifton, G. (2012). Supporting the development of critical thinking: Lessons for widening participation. *Widening Participation and Lifelong Learning*, 14(2), 29–39. <https://doi.org/10.5456/WPLL.14.2.29>
- Dennis, C. A., & Waterhouse, P. (2020). *Writing COVID-19 into your thesis*. https://www.open.ac.uk/students/research/system/files/documents/Writing%20COVID-19%20into%20your%20thesis_with%20license.pdf
- Di Malta, G., Bond, J., Conroy, D., Smith, K., & Moller, N. (2022). Distance education students' mental health and connectedness and academic performance during COVID-19: A mixed methods study. *Distance Education*, 43(1), 97–118. <https://doi.org/10.1080/01587919.2022.2029352>
- Illeris, K. (2003). Towards a contemporary and comprehensive theory of learning. *International Journal of Lifelong Education*, 22(4), 396–406. <https://doi.org/10.1080/02601370304837>
- Kehrwald, B., & Oztok, M. (2016). Social presence and impression management: Understanding networked learners' cultivation of learning networks. In *Proceedings of the 10th International Conference on Networked Learning 2016* (p. 226–233). Lancaster: Lancaster University.
- LaDonna, K. A., Taylor, T., & Lingard, L. (2018). Why open-ended survey questions are unlikely to support rigorous qualitative insights. *Academic Medicine*, 93(3), 347–349. <https://doi.org/10.1097/ACM.0000000000002088>
- Nolan-Grant, C. R. (2019). The Community of Inquiry framework as learning design model: A case study in postgraduate online education. *Research in Learning Technology*, 27. <https://doi.org/10.25304/rlt.v27.2240>
- Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education*, 14. <https://www.learntechlib.org/j/JDE/#:-:text=The%20International%20Journal%20of%20E-Learning%20%26%20Distance%20Education,a%20forum%20for%20the%20dissemination%20of%20international%20scholarship>
- Weidlick, J., & Bastianens, T. J. (2019). Designing sociable online learning environments and enhancing social presence: An affordance enrichment approach. *Computers & Education*, 142. <https://doi.org/10.1016/j.compedu.2019.103622>
- Yaun, J., & Kim, C. (2014). Guidelines for facilitating the development of learning communities in online courses. *Journal of Computer Assisted Learning*, 30(3), 220–232. <https://doi.org/10.1111/jcal.12042>
- Zheng, L., Bhagat, K. K., Zhen, Y., & Zhange, X. (2020). The effectiveness of the flipped classroom on students' learning achievement and learning motivation: A meta-analysis. *Educational Technology & Society*, 23(1), 1–15. <http://www.jstor.org/stable/26915403>



12

Implications of COVID-19 on Researcher Development: Achievements, Challenges, and Opportunities

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Contextual Background

The needs of postgraduate researchers (PGRs) within UK Higher Education are quite different from those faced by either undergraduate or postgraduate taught students. Instead of having to pass scaffolded levels within a hierarchy of education, PGRs are on a continuous learning journey. Furthermore, there are a variety of modes of delivery that vary depending upon the type of programme PGRs are undertaking. Therefore, a bespoke type of researcher development delivery, that will help maintain PGR motivation and engagement, is pivotal (Delahunty et al., 2014).

To support this active community of PGRs, it is essential that a university provides a portfolio of training and development opportunities. Researcher development workshops at Bournemouth University have traditionally been provided synchronously and on campus. Year on year

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the Researcher Development Programme has continuously improved based on PGR and staff feedback. Whilst there was already growing demand from the PGRs for the provision of a more flexible and accessible Researcher Development Programme, that would support their holistic development (Devis-Rozental, 2018, 2020), there had previously been limited changes across the organisation with respect to any form of online provision. COVID-19 required the university to react, and respond, rapidly to maintain the level of learning and development opportunities expected by all student populations including PGRs.

When national lockdown was implemented, and university campuses across the UK closed, the instinctive reaction for our Researcher Development Programme was to withdraw all forthcoming workshops. There were countless uncertainties to contemplate: how long was access to campus going to be restricted, what immediate support did our PGRs require, and what additional work did university staff now have to contend with? There was a need to reprioritise workloads and assist with the initial lockdown support efforts.

Very quickly there was a realisation that lockdown was extending longer than originally anticipated, even if campus-based teaching was to resume, there would likely be significant restrictions on resources and accessibility. Providing opportunities for researcher development is a guiding principle of the UK Quality Code for Higher Education (Quality Assurance Agency, 2018) and even during a global pandemic, our commitment to these principles remained. Highlighting the on-demand resources available, although extensive, was not a suitable substitute to the diversity of provision previously offered. Synchronous sessions needed to be reinstated to ensure our PGRs still had access to researcher development opportunities, and holistic support, through a sense of continuity and community during an increasingly worrying and isolating time (Farrell & Brunton, 2020).

While there was a wide range of digital learning technologies available to deliver researcher development sessions, as programme management, there was an awareness of the potential challenges experienced by our facilitators, many of whom had been thrown into the 'deep end' with the need to learn new technologies overnight. Thus, the choice of delivery method, and platform, was given to the facilitator to reduce additional

expectations on them. With the PGRs' experience and engagement at the forefront of our thinking (Farrell & Brunton, 2020), we were cognisant of the confusion multiple delivery platforms may cause; therefore personalised emails were sent to attendees outlining the specific joining instructions per session to help mitigate this challenge. There is increasing acceptance of the variety of delivery platforms, and going forward a more streamlined, less administratively heavy approach, should be implemented to benefit the experience of all stakeholders.

As highlighted, initially there was a dip in synchronous development opportunities provided. A year on, there have been accelerated planned changes for the Researcher Development Programme driven centrally by the Doctoral College in response to the ongoing disruption caused by the COVID-19 pandemic. Continued live online workshops present their own challenges, including the recently coined 'Zoom fatigue' (Sklar, 2020) and ongoing heavy academic and administrative workloads in adapting to alternative delivery methods.

Going forward, there is a delicate equilibrium required between the amount of synchronous, and asynchronous, resources and opportunities offered to ensure these consider the social and psychological aspects of learning (Waight & Holley, 2020). It is important to provide appropriate spaces for conversation, networking, and encouraging a sense of belonging beyond the confinements of a screen to help mitigate the potential risk of 'technostress' for PGRs and facilitators, and to support the well-being of our academic communities (Devis-Rozental, 2018, 2020). There remains an opportunity for further diversification and adaptation to online delivery of researcher development to ensure needs are met and the missing interactions are addressed (Delahunty et al., 2014).

At times, delivering a comprehensive suite of researcher development workshops via this new approach, amid a global pandemic, has felt like a phenomenal challenge which has considerable factors and changes beyond our control, namely technological issues. However, indicative feedback received to date has been largely positive surrounding the changes. While it has neither been easy nor straightforward, the collaborative approach with facilitators and learning technologists, and the sympathetic attitude of our PGRs, has helped and driven us to adapt at pace. This drastic and dynamic shift in the delivery method, for synchronous researcher development

sessions, has been invaluable in exacerbating the move to more diversified provisions in supporting our distinctive PGR community to engage in research and professional development opportunities. Nevertheless, while the changes present many opportunities, we must take the time to carefully reflect on them before making a lasting pivot to this new way of delivering researcher development.

In this case study, we further reflect upon the challenges experienced, and outcomes achieved, during the COVID-19 pandemic, when delivering this centralised programme of researcher development for PGRs at Bournemouth University. Key lessons learnt and opportunities are defined and discussed, to inform future programme design and delivery. Crucially, in the case study we place a multi-dimensional lens on this experience, considering our key stakeholders, that is, the PGRs attending research development sessions and the workshop facilitators delivering online sessions.

The implications and significance of this adjustment to online delivery for researcher development on PGR learning and experience, and its facilitation, were previously unknown. Whilst the lessons to be learnt from this case study will influence future delivery, there is little doubt that online provision of development workshops for PGRs will remain a core element of the portfolio of support provided by the Doctoral College for the foreseeable future.

Research Procedure

In this study we adopted an interpretivist philosophical approach to enable an understanding to be developed regarding the thoughts and views of the research participants (PGRs and facilitators) and relating to their experience of online researcher development workshop held during the period April 2020 to November 2020. As such, we utilised an inductive approach so that inferences can be made from the data collected (Woo et al., 2017).

This is a mono-method study, with a data collection strategy formulated around the use of two different, but complementary, qualitative surveys. The questions used in each survey are detailed in Table 12.1. The

Table 12.1 Primary data collection questions asked in the qualitative surveys for facilitators and PGRs

The primary data collection questions asked in the qualitative survey for facilitators	The primary data collection questions asked in the qualitative survey for PGRs
<ul style="list-style-type: none"> i. What have been the top 5 benefits that you have experienced from the Researcher Development Programme workshops being moved to online delivery in 2020? ii. During any of the online Researcher Development Programme workshops that you have organised and/or delivered in 2020, what do you think are the top 5 things that have worked particularly well? iii. During any of the online Researcher Development Programme workshops that you have organised and/or delivered in 2020, what do you think are the top 5 things that have NOT worked particularly well? iv. What have been the top 5 challenges that you have personally experienced from the Researcher Development Programme workshops being moved online in 2020? v. What are the top 5 ways that your organisation and/or delivery in 2020 of online Researcher Development Programme workshops could have been improved? 	<ul style="list-style-type: none"> i. What have been the top 5 benefits that you have experienced from the Researcher Development Programme workshops being moved to online delivery in 2020? ii. During any of the Researcher Development Programme workshops that you have attended in 2020, what do you think are the top 5 things that have worked particularly well? iii. During any of the Researcher Development Programme workshops that you have attended in 2020, what do you think are the top 5 things that have NOT worked particularly well? iv. What have been the top 5 challenges that you have personally experienced from the Researcher Development Programme workshops being moved online during 2020? v. What are the top 5 ways that your experience of participating in online Researcher Development Programme workshops during 2020 could have been improved?

first survey was targeted at the Researcher Development Programme workshop facilitators and related to sessions which were delivered online in response to the university campus closure instigated to mitigate the spread of the COVID-19 virus. The second survey was targeted at the PGRs who attended such online development workshops. Note: the

participant PGRs attending workshops, may not have attended the workshops delivered by the participant facilitators.

In both cases, there were no major defining characteristics in the populations. Sampling for this research has therefore been based upon non-probability self-selection from each relatively homogeneous population, that is, a call for participants was emailed directly to 33 facilitators, and to all PGRs, inviting them to take part in the research. Data were collected only from those who self-selected themselves and wished to support the research on a voluntary and anonymous basis. We wish to thank these participants without whom this research could not have taken place.

A favourable ethics opinion for this study was given by Bournemouth University in line with our Research Ethics Code of Practice (Reference 33605). This is a cross-sectional study collating the thoughts and views of the participants at the time of data collection. There has been no attempt to cross-reference these opinions against those held by the same facilitators, or PGRs, from before the COVID-19 pandemic, as no suitable comparison data were available.

We carried out a face validity test to confirm that there was no obvious ambiguity or overlap across the questions being asked (Saunders et al., 2019). A small-scale pilot was completed to confirm this. Data collection, using the JISC Online Surveys tool, was then undertaken in the 7-week period running from 12 October 2020 to 30 November 2020, with both surveys being open for this entire period. Two reminder emails were issued during this period to encourage further participation in the research. In total, data were collected from 6 facilitators and 20 PGRs.

We used Recursive Abstraction for the analysis of the data collected. Recursive Abstraction is an iterative process specifically for analysing qualitative data from a range of sources including interviews, focus groups, observations, narratives, and questionnaires (Polkinghorne & Taylor, 2019). The process follows a series of repeatable steps to identify initial high-level Themes and Codes within these Themes. As the data are collapsed, new Themes and Codes emerge. By combining and collapsing the data repeatedly, final Themes (high-level groups or categories) and Codes (low-level subject indicators) are revealed (Polkinghorne & Taylor, 2022). It is by reviewing these final Themes and Codes that patterns and trends within the qualitative data collected are revealed.

As defined by Polkinghorne and Arnold (2014), the six steps of the Recursive Abstraction process are:

- **Step i.** Highlight the data of interest.
- **Step ii.** Extract the highlighted data.
- **Step iii.** Paraphrase the data using the researcher's own words yet retaining the meanings.
- **Step iv.** Group the paraphrased data relating to different topics together to form Themes. Data within a Theme should always be connected.
- **Step v.** Replace the paraphrased data with Codes. Codes still encapsulate the original meanings.
- Repeat steps 4 and 5 as required to collapse the data as much as possible.
- **Step vi.** Check Codes against the original data to eliminate errors, and then any identified patterns and trends are revealed. Make recommendations based upon this new understanding of the phenomena being investigated.

Data Analysis

Facilitators

Following our application of the Recursive Abstraction process, a summary table for the facilitator data collected and analysed is detailed in Table 12.2. Each participating facilitator has been awarded a label in the range F1 to F6.

Theme: Facilitators

All participants reported a change in their level of stress which was directly associated with the organisation and delivery of online development sessions for PGRs. In one case, the stress was reduced due to the removal of travel time and the potential for delays. Another example was a reduction in stress resulting from the ability to slot online teaching more easily within a portfolio of other academic activities on the timetable, as there was no requirement for room bookings.

Table 12.2 Summary table for facilitators' data following Recursive Abstraction analysis

Themes	Codes	F1	F2	F3	F4	F5	F6
Facilitators	Stress	*	*	*	*	*	*
	Training		*	*			*
PGRs	Attendance	*	*	*	*	*	*
	Engagement		*	*	*	*	
	Interaction	*	*	*	*	*	
	Motivations	*		*	*	*	*
Session Delivery	Breakout rooms			*		*	
	Chat function	*	*	*			*
Session Structure	Recordings	*	*				
	Blended		*	*	*	*	
	Management	*	*	*	*		*
	Technology	*	*	*	*	*	*

I'm uncertain about how it will go, and so I feel like I have less control, even though I might actually have more control (F2).

However, in all other cases, the stress was reported as being at an increased level. Control was an important factor, and the insecurity of not knowing if home broadband would function or not as required, and when required, to support online teaching, was a common response. Stress was also reported due to the ongoing merging of work and home life, and general concerns about technology working as planned. Facilitators reported the need for training to enable them to make use of the available technologies more effectively.

I didn't really understand all the things that I needed to know (F2)

Theme: PGRs

Attendance was considered to be higher in the online workshops. This may have been because the PGRs appreciated the effort behind the online provision, or that they felt more comfortable attending from their own homes.

I just get the general impression that people feel more at ease in their own homes (F3)

Late arrivals joining the online workshops were recognised as being a problem as the facilitator had to both monitor and admit students during the live session, when they were already balancing technological needs, and delivering their workshop. It was reported that there was often a tension between starting the workshops on time, and therefore leaving behind the late arrivals, or waiting for PGRs to join the session, who might never arrive and thus losing valuable workshop time as a result.

Engagement levels were reported as being higher, with PGRs potentially learning more as a result. However, the online delivery was considered limiting in its ability to support networking between the facilitators and the PGRs, and the PGRs and their peers. Some of the networking benefits were lost as a result. This could be partly as a consequence of reduced interactions during break times, and students keeping their cameras off during sessions. Facilitators noted it was harder to find the energy to deliver an engaging online workshop, when it is difficult to know who is there, and if they are listening. Nevertheless, the overall consensus on PGR engagement during the online workshops was positive.

It is considerably more difficult to draw energy from a group, when staring at a series of blank screens, as most participants leave their cameras off. (F4)

Theme: Session Delivery

The use of breakout rooms within the online platform enabled PGRs to work in small groups. The PGRs appeared to appreciate this and had more conversations as a result. Regarding the use of the chat functions, PGRs were able to ask questions at any point in the workshop. This removed barriers for some, and encouraged a more uniform level of interaction, without disrupting the workshop. Facilitators mentioned that they could return to the chat function afterwards to collate questions asked, which enabled them to respond later in some cases. Similarly, recording the sessions provided PGRs with a resource that they could return to if they wished to seek clarification on the material presented.

People seem more comfortable raising questions in the chat area than when in person (F3).

Theme: Session Structure

The transition to online workshops was considered a good thing, enabling sessions to be delivered that would otherwise need to be cancelled, and bringing together PGRs for mutual support and learning. However, the management of such sessions raised challenges. For example, fixed breaks were required, and needed to be clearly signposted in advance to help manage PGRs expectations and aid the flow of each session. Furthermore, facilitators reported that PGRs didn't always demonstrate good time-keeping, that is, arriving late and leaving sessions early, resulting in disruption. Additionally, PGRs often appeared to be multi-tasking and perhaps consequently not concentrating fully.

[A] fixed break in the middle of a long session helps students to plan (F1).

All facilitators recognised the problems of internet connectivity for both themselves and the PGRs. It was also noted that a wider range of technology-enhanced learning tools could be used, with the result that their teaching could be more varied, engaging, and interesting.

Online is more informative for students (F1).

Postgraduate Researchers

As with the data analysis for the facilitators' survey responses, following our application of the Recursive Abstraction process, a summary table for the PGR data collected and analysed is detailed in Table 12.3. Each participating PGR has been awarded a label in the range P1 to P20.

Theme: PGRs

Many PGRs reported missing their peers. Online researcher development workshops were helpful in this regard compared to nothing being offered, but their level of social interaction with other PGRs remained limited. Seeing faces was therefore an important part of replicating the

pre-COVID-19 on-campus synchronous workshops. In the absence of in-person interactions, PGRs reflected that the amount of screen time they have been experiencing is high, and online delivery of workshops adds to this problem. Nevertheless, interactions during online workshops were recognised as being important for their mental health and motivation.

It kept me motivated and engaged with the university and fellow PGRs (P10).

Regarding the need for pre- and post-session work, some PGRs considered this as a potential problem area due to other demands on their time. This also applied to watching lecture recordings. As with the facilitator feedback, recorded content was recognised to be of value for ongoing development purposes, but the time required to watch them, and to absorb the material, proved to be difficult for some.

...not enough time to view videos due to prior commitments and I was therefore unable to attend (P3).

With respect to interactions with the facilitator, responses varied with some PGRs asking for more ‘question and answer’ opportunities, and others reporting that they were comfortable that enough were already being provided. Certainly, with online teaching, there was a clear indication of the importance of interaction with the facilitator.

[online sessions] need more interactions with the facilitator (P1).

Theme: Session

The online session environment was considered safe from COVID-19, which was significantly beneficial to several participating PGRs. Furthermore, some PGRs reported fewer distractions when working from home, which allowed them to concentrate better on their learning, contrary to the facilitator’s findings.

For online workshops to be effective, very visual and engaging materials were viewed most positively. However, in some cases, the PGRs didn't consider that the facilitators had adapted their materials to accommodate this change in delivery method, and as a result, reported workshop materials being not always 'fit for purpose'.

Some presenters just present their material as a chalk and talk session when the technology offers many opportunities to design better presentations, cover topics in new ways and to confirm understanding (P15).

Furthermore, PGRs reported facilitators taking too long on introductions across attendees, the facilitator and to the workshop material. PGRs felt the online sessions needed to 'get to the point' more quickly, this was one of the time-management challenges raised, alongside their desire for more networking time to be built into sessions.

Sessions where the facilitators took more time on introductions usually never ended on time (P19)

Theme: Programme

Certainly, the online delivery of researcher development workshops was seen by many PGRs as being accessible and informative, and the flexibility for being able to access this type of support and guidance, during a period of enforced working from home, was very much appreciated.

It is my opinion that online workshops have been an improvement to the Researcher Development Programme and that it should be maintained after the pandemic (P1).

The range of sessions being offered was acknowledged to be wide and varied. Nevertheless, with the absence of on-campus support, PGRs expressed that they required an increasingly wider range of topics to be covered compared to pre-COVID-19, and topics needed to be in more depth. However, in the case of more practically orientated sessions, it was highlighted that these were more difficult to follow when delivered online.

While online sessions are great, I think face to face sessions are better for practical sessions that involve the use of software etc. (P19)

Regarding the access to technology, some PGRs raised concerns regarding internet and broadband access, knowing how to access researcher development materials, and the use of Zoom for the live sessions. All of which are integral to their ability to engage fully.

Scholarship on Long-term Impacts

With the arrival of the COVID-19 pandemic, the University was required to respond quickly so that a synchronous provision based upon online teaching, could be provided, ensuring that PGRs were still supported holistically during such a disruptive time. The staff across the UK Higher Education sector have worked passionately, in these difficult times, to create and support an innovative learning environment, which has promoted equality of opportunity and increased accessibility in an agile way, to enhance the overall student experience.

In this case study we have focussed on decisions undertaken, challenges experienced, and outcomes achieved to derive what lessons can be learnt from this experience and the opportunities this presents. We have identified a series of recommendations emerging from this case study:

- i) Internet connectivity is an unknown variable causing stress for both facilitators delivering workshops, and PGRs attending. An open and honest conversation between these two stakeholder groups is recommended so that a more empathetic response can be obtained from both, thus reducing unnecessary stress.
- ii) Delivering online training is distinctly different from delivering in an on-campus format, and facilitators need training, not just in using the technology, but also in how materials appear on screen, the often-demanding requirements for pre- and post-work to be completed by the PGRs, and the opportunities for making workshops more engaging.

- iii) PGRs need to recognise that attending, and engaging, in researcher development workshops requires them to exhibit good timekeeping, and that they also play a role in how well the session is delivered through their participation, that is, use of their own cameras (or not), and their interactions during ‘question and answer’ sessions. Improvements to workshop professional etiquette documentation and advice should be undertaken and promoted.
- iv) Facilitators should be aware that an important dimension of their workshop is the social aspect, and the ability of the PGRs to network and develop meaningful relationships with their peers. This is a key element of their personal and professional development. The use of chat functions and breakout rooms needs to be incorporated into sessions as much as possible, together with allocating time for conversations and relationship building. Accounting for the holistic needs of PGRs when developing these types of synchronous programmes will have a positive impact on their well-being, aiding both motivation and engagement.
- v) Both facilitators and PGRs should appreciate that the time attending a researcher development workshop is quality time which needs to be used wisely and sensitively, minimising irrelevant information, and attempting to give their full attention to get the best from the experience.
- vi) Researcher Development Programme management needs to consider streamlining the administrative aspects of coordinating and delivering this suite of online researcher development workshops. This is of particular importance where there is pre- and/or post-work required by attendees.

The overall arching outcome is that both facilitators and PGRs valued researcher development workshops being delivered online, and that this form of delivery is most likely to be continued for the foreseeable future. The recommendations detailed above will now be incorporated into university guidance, practice, and strategy to ensure that the opportunity for delivering researcher development workshops online is optimised for all key stakeholder groups to enhance their experience.

References

- Delahunty, J., Verenikina, I., & Jones, P. (2014). Socio-emotional connections: Identity, belonging and learning in online interactions. A literature review. *Technology, Pedagogy and Education*, 23(2), 243–265.
- Devis-Rozental, C. (2018). *Developing socio-emotional intelligence in Higher Education scholars*. Palgrave Macmillan.
- Devis-Rozental, C. (2020). Socio-emotional intelligence. A humanising approach to enhance wellbeing in Higher Education. In C. Devis-Rozental & S. Clarke (Eds.), *Humanising Higher Education: A positive approach to enhance wellbeing* (pp. 15–34). Springer.
- Farrell, O., & Brunton, J. A. (2020). Balancing act: A window into online student engagement experiences. *International Journal of Educational Technology in Higher Education*, 17, 25.
- Polkinghorne, M., & Arnold, A. (2014). *A six step guide to using recursive abstraction applied to the qualitative analysis of interview data*. Discussion Paper. Poole, England: Bournemouth University.
- Polkinghorne, M., & Taylor, J. (2019). *Switching on the BBC: Using recursive abstraction to undertake a narrative inquiry based investigation into the BBC's early strategic business and management issues*. SAGE Case Studies in Business and Management Research Methods, Part 2, 1–20.
- Polkinghorne, M., & Taylor, J. (2022). Recursive abstraction method for analysing qualitative data. In D. Buhalis (Ed.), *Encyclopaedia of tourism management and marketing*. 636–638. Edward Elgar Publishing. <https://doi.org/10.4337/9781800377486>.
- Quality Assurance Agency. (2018). *UK quality code, advice and guidance: Research degrees* [online]. Quality Assurance Agency, Gloucester.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Sklar, J. (2020). 'Zoom fatigue' is taxing the brain. Here's why that happens. <https://www.nationalgeographic.com/science/2020/04/coronavirus-zoom-fatigue-is-taxing-the-brain-here-is-why-that-happens/>
- Waight, S., & Holley, D. (2020). Digital competence frameworks: Their role in enhancing digital wellbeing in nursing curricula. In C. Devis-Rozental & S. Clarke (Eds.), *Humanising higher education: A positive approach to enhance wellbeing* (pp. 125–144). Springer.
- Woo, S. E., O'Boyle, E. H., & Spector, P. E. (2017). Best practices in developing, conducting and evaluating inductive research. *Human Resource Management Review*, 27(2), 255–264.



13

Redefining the Role of Programme Leadership in Preserving Intended Learning Outcomes during the COVID-19 Crisis

Khadeija Elsheikh Mahgoub

Contextual Background

Established in 2006, Princess Nourah bint Abdulrahman University (PNU) is a female-only public university in Riyadh, Saudi Arabia. It is regarded as a symbol of women's empowerment in Saudi Arabia. Occupying an area of eight million square metres, PNU prides itself on being the world's biggest women's university. Being well equipped with information and communication technology (ICT) systems, even before the COVID-19 pandemic, the university had invested in learning management systems; it continued to provide training and consultation sessions to staff after the pandemic started. True to the 'Saudisation' policy, most staff are Saudi females, with non-Saudi academic staff appointed on a temporary basis.

PNU's Law Department (LD) was one of four College of Business Administration (CBA) departments. The Law Department offered the

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bachelor's degree of law only to female Saudi students and a few non-Saudis until May 2020. In August 2020, the Law Department was transformed into a separate college.

Quality Assurance

All PNU's colleges have focused on achieving intended learning outcomes (ILOs) in the past few years. In this context, the Law Department exerted great efforts to adopt an outcome-based constructive alignment approach to teaching and learning (Biggs & Tang, 2011; International Association of Law Schools, 2013). Quality assurance measures within all university departments focused on guaranteeing this form of teaching and learning. Later, this strategy conformed well to the Kingdom's Vision 2030, announced in 2016, in which a knowledge-based economy is a key feature (Al-Fayad, 2016).

PNU's quality assurance system holds the Programme Director (PD) responsible for several issues, such as maintaining the programme's quality standards of education in liaison with course coordinators and course instructors. The Programme Director also plans and verifies that the programme is presented in accordance with approved teaching and learning strategies. Moreover, the College of Business Administration's quality assurance measures have established a hierarchical quality assurance system within the department. The Programme Director, in the top role, is responsible for establishing, monitoring, and implementing quality management system processes. The Programme Director's publicly visible work throughout the academic year included deciding on the constructive alignment of course specifications with the intended learning outcomes and conducting other relevant managerial tasks. The Programme Director trained colleagues to handle work requirements.

The Teaching and Learning Factor

Some might argue that quality assurance measures differ from purely academic approaches to teaching and learning, particularly regarding intended learning outcomes. This suggests that 'identifying learning

outcomes ... is an activity that potentially addresses academic issues more than the organizational dimensions that tend to be the focus of traditional quality assurance.' (Aamodt et al., 2018, p. 615). However, the Programme Director's role within the College of Business Administration's quality assurance system took a comprehensive approach combining both the academic and organisational contexts. The college amalgamated some educational affairs with quality assurance measures. Often, the Programme Director reported to both the college vice-dean for educational affairs and the head of quality assurance.

The Leadership Factor

The Programme Director's leadership role influences others. 'Simply understood, leadership describes a process of influencing others' (Cunningham & Michael, 2020, p. 5). I was the Law Department's Programme Director from January 2018 to August 2020. During this period, I recognised that the effective performance of such a broad and unique role required leadership skills and an approach that always acknowledges others (Doraiswamy, 2012).

In this context, the current research aims to examine the leadership role of the Law Programme Director in preserving intended learning outcomes during the initial COVID-19 pandemic-driven remote learning and identify any innovative approaches. This study spanned the period between March-May 2020 and was driven by the following two research questions:

- i. What role does the Programme Director play in times of crisis-driven remote learning?
- ii. How can the Programme Director preserve the intended learning outcomes during times of crisis-related remote learning?

Programme Leadership amid a Pandemic

Like most of the world, Saudi Arabia was affected by the COVID-19 pandemic during the second semester of the 2019–2020 academic year. On 8 March 2020, the Education Minister announced the closure of all

universities and mandated a shift to remote learning (Saudi Press Agency, 2020). This sudden change tested the resilience of PNU's entire quality assurance system and related measures and intensified scrutiny of the Programme Director leadership role.

Initially, there were many uncertainties around the duration of the lockdown and operational process. This pandemic has induced a similar global crisis. As described by Gerada (2021, p. 1), 'From the start, there were more unknowns than knowns'. For instance, the College of Business Administration initially announced that staff would continue working on campus while students would work remotely. This decision changed several times until the authorities announced that the lockdown would be universal.

Throughout my time as a Programme Director, my strategy was to anticipate plan changes made by decision-makers early. However, the abruptness of the remote learning change deprived me of this important survival tool, greatly raising situational stakes. Nevertheless, I found that a way to compensate for this was by having direct access to decision-making sources. My position during the crisis put me in the same WhatsApp group with some of them. Being in this group gave me first-hand knowledge of the contemporary and intended future plans which facilitated my role in giving the required support to the team (Harvard Business Review, 2020).

Adaptation is an important step in crisis management (Harvard Business Review, 2020). In response to the crisis, my initial step aimed at 'quality adaptation'. This means adapting in a manner that will successfully achieve intended learning outcomes in a new and turbulent crisis environment (Uhl-Bien & Arena, 2018).

The complex situation involved intricate and unpredictable challenges for me and the entire quality assurance team. I needed to ensure that the entire quality assurance system was 'adaptive in the face of complex challenges' (Uhl-Bien & Arena, 2018, p. 89). It required flexibility, agility, and adaptation. In quality assurance terms, this meant being mindful of meeting formats, channels of work submissions, and working hours (Uhl-Bien & Arena, 2018).

Areas of Focus

In retrospect, I would say that innovative and agile adaptations were essential in both communication and the quality of support for the quality assurance team. Communication is imperative to leadership (De Vries et al., 2010). Maintaining quality communication with the quality assurance team was vital for two reasons. First, communication provides information on the necessary work, which leads to the recognition of intended learning outcomes (Harvard Business Review, 2020; Watkins & Walker, 2021). Second, if sensibly achieved, communication gives the quality assurance team a feeling of support, conceivably contributing to the dynamics of the intended learning outcomes achievement.

During the crisis, I worked with all quality assurance team members who looked to the Programme Director for guidance in such a critical situation. I considered how to support them by providing what I term 'efficient and facilitated' guidance (Watkins & Walker, 2021).

Methodology

After obtaining ethical clearance, I conducted a case study descriptive research to authenticate the arguments in this chapter, as it is a 'research method used to describe the existing phenomena as accurately as possible' (Atmowardoyo, 2018, p. 198).

To guarantee that the participants fully understood the form, I provided both English and Arabic copies. No managerial power was exercised over any participant. They were all academic staff involved in teaching and/or quality assurance at the start of the COVID-19 crisis. I measured their positions in quality assurance teams to gauge the effectiveness of leadership elements among such variable groups, as shown in Table 13.1. Due to difficulties in accessing all relevant populations, non-probability sampling (Walliman, 2018) was applied for data collection.

The first research instrument was an electronic questionnaire with three demographic questions on position/quality assurance responsibilities, expertise, and academic degrees (De Vries et al., 2010). An additional 16

Table 13.1 The ANOVA results in relation to position

	No	Mean	Std	F	P-value	Statistical significance
Year coordinator	5	4.00	0.985	14.845	0.771	Not significant
Course coordinator	5	4.01	1.011			
Course teacher	3	4.13	0.877			

questions concerned the type of leadership, facilitation, communication, and support the staff received from the Programme Director (Clark et al., 2019). All items were rated on a 5-point Likert scale. A total of 16 questionnaires were sent to the staff, representing year coordinators, course coordinators, and course instructors during the study period and the contemporary academic year. Thirteen responses were collected.

To gain a deeper understanding of the three main intersections of the study, that is communication, support, and previous experiences of staff on quality assurance work, interviews were also conducted with four from the same participants in the electronic questionnaire. In these interviews, I adopted the flexible interview method, whereby the speaker has the space to answer the questions asked in his/her own; then, considering his/her answers, I determined new questions.

Statistical Analytical Processes

I used SPSS version 25 to analyse the questionnaire data and descriptive statistics to demonstrate the findings of the questionnaire (Clark et al., 2019). I calculated the means and standard deviations of the independent variables and rated them as follows: strongly disagree (1–1.80), disagree (1.81–2.60), neutral (2.61–3.40), agree (3.41–4.20), and strongly agree (4.21–5.00). The range for the Likert scale values 5–1: $5-1 = 4$ was calculated. The range was divided by the number of columns in the scale: $4/5 = 0.8$, with the objective of determining the real length of each response range, and it is equal to 0.8. This length was added to the number of the first response 1; therefore, the range of the first response is equal to $0.8 + 1 = 1.8$, and each mean located in this area indicates that the response is strongly disagreed. The second range of the responses starts from 1.80 and finishes at 2.60: $0.8 + 1.8 = 2.6$, where each mean is

more than 1.80 and less than or equal to 2.60 means that the response is disagreed. By adding the range 0.8 to the value 2.60, I reach the third range (2.60–3.40), and the responses in this range are considered neutral. The responses in the frontiers of the range (3.40–4.20) indicate that the responses are consistent. The means in the last range (4.20–5) refer to the responses ‘strongly agree’.

A one-way ANOVA was performed to test the hypotheses that there were no statistically significant differences in the sample according to participant positions.

Results and Findings

The results shown in Table 13.1 confirm the hypothesis that there are no statistically significant differences in responses according to the respondents’ positions.

Findings

I categorised the results into two key elements: communication and support provided by the Programme Director to staff during the set period. The role of the Programme Director during the distance education period to preserve the intended learning outcomes was tested through 16 different items, five of which were in communication with the quality assurance staff (Table 13.2).

Table 13.2 shows that most of the respondents strongly agreed that communication with the Programme Director through various channels was easy, timely, comprehensive, balanced (‘neither too much nor too little’), and appropriate for their needs. They also agreed that the Programme Director was keen to communicate urgent quality assurance requirements with suitable timeframes.

Moreover, considering the collected interview answers, I extracted the following results regarding communication. All answers about the communication process during the remote-learning period indicated that it was smooth and fast. One of the interviewees rated the period’s

Table 13.2 Statistical analysis of response to the questions on communication

Statement	Mean	Std. D	Rank
Easy communication	4.46	0.666	3
Keeness on timely announcement of updates	4.07	0.954	13
Variety of communication tools and support	4.15	0.800	11
Reasonable communication with QA staff 'neither much nor little'	4.30	0.480	6
Satisfactory response to staff's needs, solving problems, and answering questions	4.38	0.650	4

communications as 10 out of 10, saying, 'During the remote-learning period, I was able to communicate with the Programme Director easily'. The average was 4.46/5.00, meaning that the participants strongly agreed with the ease of communication with the Programme Director. In addition, this result agreed with the result of the quantitative analysis of the statement relevant to the Programme Director's keeness on the timely announcement of the required updates with suitable timeframes, which the study members agreed on with a mean of 4.07. This also agrees with the statement on communication tools and support provided, which met requirements for any urgent updates, with a mean of 4.15.

The interviewees also stated that communication on any matter related to the programme was done directly through WhatsApp, phone calls, or other appropriate methods. They noted that the Programme Director contacted them early to notify the requested work as soon as possible rather than waiting until deadlines approached; the Programme Director also allowed the participants ample time to respond to the required work. The respondents found the Programme Director's method was tactful and professional, which aligns with the quantitative analysis showing that the Programme Director responded quickly and appropriately to the staff's needs, solving their problems, and answering questions through the various communication channels; the average score of 4.38 indicated that the participants strongly agreed with this point.

The interviewees also reported that tasks requested by the Programme Director were clear and specific, despite difficulties in remote teaching, quality assurance tasks and duties were clearly explained. One interviewee stated that Programme Director was always available whenever her presence was needed.

Support for Quality Assurance Staff

Similarly, the role that the Programme Director played during this time to preserve the intended learning outcomes was tested on six different forms of support given, as shown in Table 13.3.

Table 13.3 shows that most participants strongly agreed that the Programme Director, during the early phase of the pandemic, provided the required individual and group support and was keen to facilitate quality assurance requirements. They indicated receiving sufficient support in relation to understanding remote teaching and learning methods. They also agreed that the Programme Director listened to their needs and supported them in realising the required learning outcomes.

Answers confirmed that the Programme Director always aided in filling in the required data, by providing necessary instructions, and removing obstacles and difficulties facing quality assurance staff, as she followed easy and clear guiding methods. One of the interviewees answered that the guiding/model approach, followed by Programme Director, helped him greatly in completing the required work, such as preparing reports.

One interviewee also stated that the effective presence of the Programme Director in the social networking groups provided great support, as she responded quickly to all questions and explained the solution to problems facing him, as well as assisting in all matters related to coordination. Interviewees also confirmed that such support contributed to achieving the desired goals, that is, intended learning outcomes.

The interviewees also stated that in many cases, the Programme Director explained what is required in an extensive manner, this is considered as great support and cooperation beyond expectation; therefore,

Table 13.3 Statistical analysis of response to the questions on support

Statement	Mean	Std. D	Rank
Keeness to facilitate work	4.61	0.506	1
Suitable support and advice regarding remote work	4.46	0.660	2
Provision of required individual and group support	4.38	0.751	5
Keeness to support in realising learning outcomes	4.00	0.816	14
Support understanding remote teaching methodology	4.00	0.912	15
Listening to staff's needs and queries	4.23	0.832	9

they did not find it difficult, especially after the first days in which there were some challenges, which were overcome with the cooperation of the group and the support provided by the Programme Director. This result is consistent with the result of the quantitative analysis regarding provision of enough support from the Programme Director in relation to understanding the remote learning and teaching methodology, which received an average of 4.00/5.00, with most of the participants approving the level of support provided by the Programme Director.

One of the interviewees also stated that had it not been for the Programme Director's efforts, communication, or follow-up would not have taken place, due to her keenness in reminding them of the tasks and in emphasising the need to accomplish them in the required manner.

Staff Knowledge and Expertise

When asked about their knowledge and skills in quality assurance work, the survey responses varied. The average score for having adequate knowledge and skills in the programme quality requirements was 3.69/5.00.

Qualitative research analysis also stated that interviewees were accustomed, by virtue of their previous experience, to deal directly with the Programme Director. They indicated that the methods imposed by the COVID-19 conditions were completely new to them. They also stated that the guiding/model approach developed by the Programme Director and the methodology followed helped them understand the system and thus carry out the process of fulfilling the required tasks.

One of the interviewees mentioned that she often resorted to the Programme Director to explain issues related to the new system and the tasks required. She reported that she found all the support from the Programme Director to understand the system and carry out work. She also stated that this was the approach of the Programme Director with all members.

The interviewees confirmed that they faced many difficulties in the beginning, as they did not have any experience in communicating in this way and accomplish all tasks remotely. They faced new developments for which they were not well prepared. However, the support they found from the Programme Director helped them get through it all.

Discussion

This research examined the effectiveness of one programme's director in continuing efforts to achieve the intended learning outcomes during the university's initial response to the COVID-19 crisis, focusing on meaningful communication and support. I hypothesised that both quality communication and support for staff would improve their ability to achieve and preserve intended learning outcomes during crises-related remote learning (Shuck et al., 2019; Fernandez & Shaw, 2020).

Not long after the outbreak of the pandemic, many said that communication and support encompassing compassion and empathy were vital elements in managing crises (Gerada, 2021). This is present in several professional contexts, including academics (Fernandez & Shaw, 2020).

Communication

It is important to note that communication is not merely the transmission of messages. 'Communication involves a complex arrangement of verbal and nonverbal, intentional and unintentional, and planned and unplanned messages (Ruben & Gigliotti, 2016, p. 3).

As Programme Directors, in times of crisis, communication with the quality assurance team is vital (Dirani et al., 2020). Several factors for quality communication must be considered. Among them are the right time, right speed, easy provision, urgent content updates, and the method/channel for communication. The results above demonstrated that these elements prevailed in my communications with the staff, and most perceived them well. Numerous respondents felt that the variety of communication tools I provided met their requirements for urgent updates and know-how.

Evidently, there was a need, during these times, for balanced communication. There should not be too many messages or posts. At the same time, we must preserve momentum, and not slacken communication. A key point is the timely announcement of the required updates with suitable timeframes. Both the staff's questionnaire responses and interview answers indicated that my communication strategies were effective during these

periods. As mentioned earlier, the availability of communication channels and training was not a cause of concern. This supported the Programme Director's role in several ways, such as answering individual intended learning outcomes-related queries of the quality assurance team. It was imperative to implement various forms of communication, tools, and support to meet individual staff requirements.

Overall, reasonable quality communication about work requirements is a technique that must be used in times of crisis.

Support for the Quality Assurance Team: Facilitation

Expertise and positions among the quality assurance team vary, as was the case in this survey cohort, and this should be considered when determining what support to provide. As pointed out earlier, despite differences in positions, several staff members did not think they had adequate knowledge and skills in the programme's quality assurance requirements. To achieve the required intended learning outcomes during this crisis, I provided tailored support by listening to the individual needs of the team. Many other disciplines recognised the need to support staff during this pandemic, for example, management education.

The pandemic has necessitated the largest and quickest transformation of pedagogic and assessment practices ever seen in contemporary universities. This puts pressure on institutional systems of quality assurance and governance, as well as increasing workload for faculty and professional staff. This required support for colleagues, including the development of formal training on ... communities of practice through which good practices were shared. (Brammer & Clark, 2020, p. 454)

PNU's Law Department conducted its work in Arabic, in contrast to other College of Business Administration departments, which primarily used English. This difference complicated an already demanding situation and necessitated guidance and language assistance regarding quality assurance-related communications between the College of Business Administration and the Law Department. To facilitate the work and

motivate the burdened staff to maintain and increase the momentum of their work in such trying times is vital. For instance, I translated files into Arabic and provided sample files for those who needed them, providing support tailored to the groups' and individuals' needs. However, a degree of balance helps avoid overwhelming the Programme Director (Harvard Business Review, 2020; Hlavac & Buller, 2020).

Support for the Quality Assurance Team: Know-how

The intended learning outcomes-related guidance and training already part of the Programme Director's responsibilities became more visible during the crisis. Support is an essential part of teamwork. Regardless of their position, one universal support need for everyone on the quality assurance team was knowing what work was required and how to do it. Knowledge-sharing was crucial as 'One important intermediate concept, which may be determined by communication styles on one hand, and which determines team performance ... and may determine satisfaction' (De Vries et al., 2010, p. 369).

Everyone turned to the Programme Director for advice. The participants in this study strongly agreed that the Programme Director provided appropriate support and advice to staff on remote teaching and learning strategies. This shows the need for such advice and suggests why the provision of model writing by the Programme Director scored high in the questionnaire.

Support for the Quality Assurance Team: Compassion

Programme Directors must be compassionate and consider how a situation affects everyone. 'Being compassionate at all times during a crisis is of great importance to ensure the decisions are as humane and understanding as possible' (Ahmed, 2020, para. 17). Understanding and individualised decisions based on compassion are important for achieving intended learning outcomes and essential traits for Programme Directors. Compassion has a ripple effect on the achievement of intended learning

outcomes (Shuck et al., 2019). The COVID-19 crisis tested the solidity of such grounding. I believe that I made my presence felt by listening to the staff's needs (Shuck et al., 2019).

Conclusion

Programme Directors play an important role in effectively activating the remote-learning process and overcoming obstacles that face its application in crisis and non-crisis situations. The goal of an academic programme is to achieve its learning outcomes, and Programme Directors play a vital role in achieving this. The takeaways of this research are that keen interest in quality, tactful and comprehensive communication, provision of the necessary support to quality assurance staff, and continued advice on overcoming obstacles facing quality assurance staff are the strategic tools for Programme Directors in agile adapting to a crisis situation.

During the COVID-19 pandemic, much has been said about the 'new normal'. How it will shape is another issue. This new normal creates situations requiring deviation from the classic and campus-based delivery of the Programme. Quality communication by Programme Directors and provision of support to the quality assurance team are the cornerstones for building efficient, flexible, adaptable, and resilient models of education. From my experience, effective quality assurance work requires coordinated teamwork. Effective communication and team support will remain an integral element of the Programme Directors' role in any future crises and non-crisis contexts, as having an effective quality assurance work is the gateway to achieving the learning outcomes.

The leadership role of a Programme Director is unique, as it is at the intersection of the institutional and pedagogical aspects of an academic programme. While this study did not conduct leadership studies, it explored some aspects of crisis and change management which are essential for the Programme Director's role in times of crisis. This study explored the leadership role of the law programme's Director in preserving the intended work requirements, namely the achievement of intended learning outcomes. I achieved this while working with the quality

assurance team during the initial two-months' remote-learning experience (March–May 2020), which emerged during the first wave of COVID-19.

The research addressed the question of what role the Programme Director plays in times of crisis-related remote learning? It also showed that in order to prevent crises inflicted damage as much as possible and in preparation for the post crises situation, both communication and staff support are paramount. They manifest first, as end points in themselves, and second, as the route towards the final achievement of the required tasks. A communication style of 'neither much nor little' is desirable during such difficult times and conceivably, in the post-COVID world as it enables others to act efficiently.

The satisfaction of the Quality Assurance team with the Programme Director's role during the pandemic suggests that it was successful and effective. The team needed quality communication and tailored support, and the Programme Director made this happen through the adoption of a humane leadership style, utilising communication and support.

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References

- Aamodt, P. O., Frølich, N., & Stensaker, B. (2018). Learning outcomes—a useful tool in quality assurance? Views from academic staff. *Studies in Higher Education*, 43(4), 614–624. <https://doi.org/10.1080/03075079.2016.1185776>
- Ahmed, D. (2020). *Educational leadership during the corona virus pandemic*. International Council for Open and Distance Education. <https://www.icde.org/icde-blog/2020/3/31/educational-leadership-during-the-coronavirus-pandemic>
- Al-Fayad, F. (2016, June 22). Saudi Vision 2030 promotes knowledge-based economy. *Arab News*. <https://www.arabnews.com/node/943041/>

economy#:~:text=At%20the%20center%20of%20the,depend%20upon%20knowledge%2Dbased%20factors

- Atmowardoyo, H. (2018). Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. *Journal of Language Teaching and Research*, 9(1), 197–204. <https://doi.org/10.17507/jltr.0901.25>
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). Society for Research into Higher Education & Open University Press.
- Brammer, S., & Clark, T. C. (2020). COVID-19 and management education: Reflections on challenges, opportunities, and potential futures. *British Journal of Management*, 31, 453–456. <https://doi.org/10.1111/1467-8551.12425>
- Clark, T., Foster, L., & Bryman, A. (2019). *How to do your social research project or dissertation*. Oxford University Press.
- Cunningham, C. M., Hazel, M., & Hayes, T. J. (2020). Communication and leadership 2020: Intersectional, mindful, and digital. *Communication Research Trends*, 39(1), 4–31.
- De Vries, R. E., BakkerPieper, A., & Oostenveld, W. (2010). Leadership = Communication? The relations of leaders' communication styles with leadership styles, knowledge sharing and leadership outcomes. *Journal of Business and Psychology*, 25, 367–380. <https://doi.org/10.1007/s10869-009-9140-2>
- Dirani, K. M., Abadi, M., Alizadeh, A., Barhate, B., Garza, R. C., Gunasekara, N., Ibrahim, G., & Majzun, Z. (2020). Leadership competencies and the essential role of human resource development in times of crisis: A response to Covid-19 pandemic. *Human Resource Development International*, 23(4), 380–394. <https://doi.org/10.1080/13678868.2020.1780078>
- Doraiswamy, I. R. (2012). Servant or Leader? Who will stand up please? *International Journal of Business and Social Science*, 3(9), 178–182. http://www.ijbssnet.com/journals/Vol_3_No_9_May_2012/21.pdf
- Fernandez, A. A., & Shaw, G. P. (2020). Academic leadership in a time of crisis: The coronavirus and COVID-19. *Journal of Leadership Studies*, 39–45. <https://doi.org/10.1002/jls.21684>
- Gerada, C. (2021). Reflections on leadership during the Covid pandemic. *Postgraduate Medicine*. <https://doi.org/10.1080/00325481.2021.1903218>.
- Harvard Business Review. (2020). *Coronavirus: Leadership and recovery*. Harvard Business Review Press.
- Hlavac C., Buller, J. L. (2020). Leading the academic department during the COVID-19 Crisis. *The Department Chair*, 31(1), 17–19. <https://doi.org/10.1002/dch.30332>

- International Association of Law Schools. (2013). Singapore Declaration on Global Standards and Outcomes of a Legal Education. Retrieved April 30, 2021, from <https://www.ialsnet.org/wp-content/uploads/2015/10/Singapore-Declaration-2013.pdf>
- Ruben, B. D., & Gigliotti, R. A. (2016). Leadership as social influence: An expanded view of leadership communication theory and practice. *Journal of Leadership & Organizational Studies*, 1–13. <https://doi.org/10.1177/1548051816641876>
- Saudi Press Agency. (2020). General/Suspension of studies in schools and institutions of public, private, university and technical education in the Kingdom, from tomorrow, Monday, until further notice. <https://www.spa.gov.sa/2044433>
- Shuck, B., Alagaraja, M., Immekus, J., Cumberland, D., & Honeycutt-Elliott, E. (2019). Does compassion matter in leadership? A two-stage sequential equal status mixed method exploratory study of compassionate leader behavior and connections to performance in human resource development. *Human Resource Development Quarterly*, 30, 537–564. <https://doi.org/10.1002/hrdq.21369>
- Uhl-Bien, M., & Arena, M. (2018). Leadership for organizational adaptability: A theoretical synthesis and integrative framework, *The Leadership Quarterly*, 89–104. <https://doi.org/10.1016/j.leaqua.2017.12.009>
- Walliman, N. (2018). *Research methods: The basics*. Routledge.
- Watkins, D., & Walker, S. (2021). Leadership crisis communication during the pandemic of 2020. *Journal of Leadership, Accountability & Ethics*, 18(1), 53–67. <https://doi.org/10.1080/23311886.2021.1901365>

Part II

**Redesigning Whole Programmes to
Meet Challenges of Remote
Learning**



14

Ready for Anything: Adaptive Curriculum Design for Interdisciplinary Team Projects in Work Integrated Learning

Leanne Piggott and Theresa Winchester-Seeto

Introduction

How do you adapt, within a week, a course designed for face-to-face, team-based project work dependent on regular engagement with partner organisations into a completely online mode of delivery? This was the challenge faced by a teaching team at The University of New South Wales, Sydney, a large, research-intensive Australian university, who were only part way through delivering a ten-week interdisciplinary project-based Work Integrated Learning course at the onset of the COVID-19 pandemic.

The immediate response was to use the University's online learning management system platform where students undertook whole-of-class learning using virtual breakout rooms for teamwork and meetings with

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their partner organisations. The approach worked well, and with some modifications, students were able to attain the necessary learning outcomes and produced high-quality project deliverables. The experience prompted consideration of how the course, initially designed for face-to-face delivery as either a four-week intensive course or a ten-week single-term or trimester course, might be adapted for fully online delivery in both four or ten-week options, thus enabling the teaching team to be ready for anything during and beyond COVID.

The authors developed an adaptive curriculum design to accommodate teaching interdisciplinary project-based Work Integrated Learning in the four course delivery variations. The authors also developed a set of Principles of Good Practice to ensure enhancement of the student experience, and to maintain learning and well-being as the heart of the design and delivery of project-based Work Integrated Learning.

Context

In this chapter Work Integrated Learning refers to authentic, partnered work learning experiences undertaken by students for credit as part of their programme of study. Work Integrated Learning activities might include placements (internships, clinicals) whereby students work within partner organisations and team-based projects requiring students to complete specific deliverables for a partner organisation while not necessarily located within the organisation. Through working directly in or with an industry, government, or community organisation, Work Integrated Learning provides the means to ‘do in context’ (University of New South Wales, 2019) and enables students to gain real-world learning experience in preparation for a future career, thus enhancing their employability and graduate outcomes (Rowe & Zegwaard, 2017).

The Work Integrated Learning course in this study is project-based, featuring small, interdisciplinary student teams of three to five students working on projects co-designed with partner organisations and is offered to students from all faculties in the third or fourth year of their degree programme. The partners provide a project brief and, in their first meeting with the students, introduce the project and their organisation. In later meetings

partners provide feedback and clarification as the project progresses. Students present their project deliverables (e.g. findings and/or recommendations and/or a product prototype) to the partner organisation via a presentation and a final written report (Piggott & Winchester-Seeto, 2020).

At the heart of the design and delivery of the course is a focus on the student learning experience, taking a holistic approach to the personal and professional development of students to equip them with skills (e.g. teamwork, problem-solving, and project management), knowledge, attributes (e.g. self-management), and experiences (e.g. organisational culture and networking) so that they might thrive in whatever future they choose. To realise these outcomes, it is essential that student learning is scaffolded including reflective practice.

The initial iteration of the course was taught as a face-to-face intensive (four weeks) in the 2020 Summer (January) session. The second iteration was intended to again be face-to-face but taught over the ten weeks of trimester one. The trimester had reached week three when the COVID-19 pandemic required all classes to be converted to fully online delivery within one week. In response, webinars were conducted on the learning management system, replacing face-to-face workshops and for final partner presentations. Teams worked in virtual breakout rooms where they also conducted meetings with their partner organisation. As the year unfolded through subsequent trimesters, the course continued to be taught fully online, while in Summer 2021 it was delivered as a fully online intensive (four weeks) course.

The accelerated development of these course delivery variations provided the opportunity to identify the core features required to ensure the success of an adaptive project-based Work Integrated Learning curriculum design and delivery, and to evaluate the efficacy of the different modes of delivery against a set of developed Good Practice Principles.

Adaptive Curriculum Design

Three core curriculum elements were identified to be essential to ensure the course met the requirements of quality Work Integrated Learning and to support student development and learning. Detailed in Fig. 1, these

are Foundation Elements, Supporting Elements, and Learning and Teaching Elements.

Foundation Elements are fundamental to any project-based Work Integrated Learning course while Supporting Elements are vital to ensuring student learning and well-being. Both Foundation and Supporting Elements are organised and presented similarly in every course iteration. The Learning and Teaching Elements are the must-haves of the interdisciplinary project Work Integrated Learning adaptive curriculum design (Table 14.1) but are shaped by the context in which the course operates and are therefore different in each course offering.

The course context comprised the mode of delivery plus other factors related to partners and students (Table 14.2). Each of the four Learning and Teaching Elements are carefully tailored to take maximum advantage of the context and to minimise any challenges presented by the respective mode of delivery.

The modes of delivery can be combined to yield four main course delivery variations: face-to-face intensive, online intensive, face-to-face trimester-long, and online trimester-long.

Table 14.1 Core Elements of the adaptive curriculum

Foundation Elements <ul style="list-style-type: none"> • Sourcing partners • Co-design of projects • Formal agreements • Student preparation toolkit 	Four Learning and Teaching Elements <ul style="list-style-type: none"> L & T Element 1: small, interdisciplinary student teams work on projects sourced from, and co-designed with, partner organisations. L & T Element 2: project advisors mentor, guide, and advise student teams via regular visits and other contact methods. L & T Element 3: partners connect with students periodically throughout the course with input and feedback to students, including team presentations and final deliverables. L & T Element 4: scaffolded knowledge and skill development provided throughout the course (e.g. reflection, teamwork, design thinking, professional behaviour).
Supporting Elements <ul style="list-style-type: none"> • Safe environment for students to risk, learn, and share ideas and experiences. • Careful matching of students with partners and projects. • Iterative approach to assessment so that tasks build on previous ones. • Reflection and debriefing throughout to support and enhance learning. 	

Table 14.2 Modes of delivery and other factors related to partners and students

Mode of delivery	Other factors related to partners and students
<ul style="list-style-type: none"> • Intensive (concentrated into four weeks) or trimester long (10 weeks) • In-person/F2F or online. 	<ul style="list-style-type: none"> • Physical location of students for online delivery—students located overseas may have large time differences, which can affect planning for synchronous delivery. • Physical location of partners for online delivery—time differences can affect how students interact with partners. • The type of Learning Management System used—whilst Moodle (incorporating ‘Collaborate’ for webinars) was initially used, Microsoft Teams has been used in more recent course iterations. • Partner preferences for student contact and the associated limitations (e.g. technology, time availability, preference of amount and mode of contact with student teams). • Value-added activities offered by some partners (e.g. networking, industry-specific/project-specific skill development, and learning about the organisation). • The number of partners and students—a class size above 40 can cause planning challenges and can test the limits of the LMS for flexible and creative delivery.

The face-to-face intensive variation entails students attending classes on campus for one week for project preparation and scaffolded learning in design thinking, teamwork, reflection, and so forth. Two weeks are then spent at the workplace, with visits from project advisors, and a final week on campus for debriefing and final assessments.

The online intensive variation relies on the learning management system or Microsoft Teams for delivery to students located across the globe. The scaffolded learning comprises a combination of synchronous online class-based activities, self-instructional modules, and guest lectures. Students work together in dedicated breakout channels with scheduled visits by project advisors for mentoring and coaching. Partners have scheduled meetings with students and virtually attend student presentations. The intensive mode runs over six and a half hours each day, with

asynchronous time blocks to give students a break from continuous synchronous activities to manage student and staff fatigue.

The face-to-face trimester-long and online trimester-long variations are ten weeks in length, with a timetabled three-hour session once per week. With far fewer hours in class students need to work both together and individually outside of timetabled class time.

The other aforementioned factors related to partners and students can influence the way the Learning and Teaching Elements are adapted. For example, one course iteration had a large cohort with seven teams working virtually on one project with a geographically remote partner. Each team crafted two written questions that were submitted before the online meeting and, with coaching from project advisors, they learnt the skill of asking succinct and useful questions. However, the meeting atmosphere was more formal, and students did not experience the more usual free-flowing discussion with partners.

Evaluation

The Work Integrated Learning course described in this paper is underpinned by five different educational strategies: project-based learning, project-based Work Integrated Learning, interdisciplinary learning, teamwork, and peer learning. This is the first time that these educational strategies have been considered together to provide a holistic evaluation of Work Integrated Learning practice. This evaluation is solely based on a review by teaching staff and thus has not sought to formally capture the views of students and partners. Examining several different permutations of the course allowed the researchers to compare and contrast their own practitioner reflections, as well as to assess student qualitative feedback captured in university-administered course evaluations. These data are coupled with informal, anecdotal evidence from partner and student reflections, providing an extensive foundation for the evaluation.

Over the past decade traditional, placement Work Integrated Learning has been transformed in some industries and disciplines in response to challenges of finding suitable, high-quality learning situations for an increasing number of students, changing industry requirements and

emerging new working conditions such as the decrease in permanent employment (Kay et al., 2019). One successful response has been the adoption of interdisciplinary project-based Work Integrated Learning, ‘a systematic educational approach that engages students from two or more disciplines in the integration of information, techniques, concepts and/or theories from their different disciplines as they work collaboratively to solve complex, authentic questions or problems generated in collaboration with industry’ (Brewer et al., 2020, p. 13).

A key feature of project-based learning and project-based Work Integrated Learning is the actual project that students work on. Hanney (2021, p. 183) contends that ‘[i]n its ideal form students will undertake live projects situated in a real-world context with a real client, who has a real business need. Furthermore, there is an expectation that the output of a project should at least have the potential for real business value for the client’. This link to a real-world context, with consequentiality for students, is important to linking the project to the workforce and provides motivation for students. When a partner simply provides a project brief and receives only the final student deliverable, only a tentative link between partner and students is established. What is arguably more important for student work learning is the ‘integration of mentoring, modelling and coaching from industry professionals’ (Hanney, 2021, p. 184). This highlights the important role of partners in Work Integrated Learning as a mode of education, irrespective of whether it is placement or project-based.

The project-based Work Integrated Learning strategy encourages the use of team, collaborative, and interdisciplinary approaches as is common in contemporary work. For students to succeed in these environments, it is imperative that they are adequately prepared, and students need to be actively scaffolded and supported to learn how to integrate diverse perspectives and approaches (Brewer et al., 2020; Lim et al., 2018). One of the main benefits for students from project-based Work Integrated Learning is enhancement of their teamwork skills (Brewer et al., 2020), but this requires careful curriculum design and scaffolded learning so that students can move beyond the normal group-work scenario to embrace a true team approach (Piggott & Winchester-Seeto, 2020). There is also a need for some degree of autonomy and choice so that teams can cohere

and develop a sense of ownership and control of the project (Brewer et al., 2020; Kokotsaki et al., 2016).

To test the efficacy of the course delivery modes, a set of fifteen Principles of Good Practice was distilled from relevant literature related to the five educational strategies. These would act as criteria to guide the evaluation. The literature search encompassed empirical research as well as both peer-reviewed and grey literature that included how-to practice guides, handbook chapters, overviews of topics such as quality in Work Integrated Learning, and government and commissioned reports. The following list in turn forms the scholarly evidence base for the adaptive curriculum evaluation.

Principles of Good Practice

Project-based Learning

1. Real-world, authentic complex projects (McRae & Johnston, 2016; Mergendoller et al., 2006; Piggott & Winchester-Seeto, 2020; Smith et al., 2016; Winchester-Seeto, 2019).
2. Partners co-design the project brief with teaching staff creating a project with potential for consequence/impact on organisation (Hanney, 2021; Piggott & Winchester-Seeto, 2020).
3. Project outcomes presented to partners (oral presentations with feedback) (Brewer et al., 2020; Piggott & Winchester-Seeto, 2020).
4. Project outcomes presented to partners (e.g. written report) (Brewer et al., 2020; Piggott & Winchester-Seeto, 2020).

Project-based Work Integrated Learning

5. Ongoing coaching, mentoring, and feedback from partners (Clark et al., 2018; Hanney, 2021; Piggott & Winchester-Seeto, 2020; Shardlow, 2015; Winchester-Seeto, 2019; Winchester-Seeto et al., 2022).

6. Ongoing coaching, mentoring, feedback from teaching staff and project advisors (Clark et al., 2018; Piggott & Winchester-Seeto, 2020; Rowe & Winchester-Seeto, 2022; Winchester-Seeto et al., 2022).
7. Scaffolded skill and knowledge development, for example, teamwork skills, design thinking, reflection (Kokotsaki et al., 2016; Piggott & Winchester-Seeto, 2020; Rowe & Winchester-Seeto, 2022; Sachs et al., 2017; Smith et al., 2016; Winchester-Seeto, 2019).
8. Reflection embedded throughout (Edwards et al., 2015; McRae & Johnston, 2016; Rowe & Winchester-Seeto, 2022; Winchester-Seeto et al., 2022).
9. Safe space for students to develop reflective skills and resilience (Piggott & Winchester-Seeto, 2020; Winchester-Seeto et al., 2022).
10. Interpersonal and small group skills are actively taught and developed (Brewer et al., 2020; Johnson & Johnson, 2009).

Interdisciplinary Approaches

11. Students from different disciplines work together to learn about and integrate the different perspectives of their disciplines' professions (Brewer et al., 2020; Lim et al., 2018; Piggott & Winchester-Seeto, 2020).

Teamwork and Peer Learning

12. Student teams work autonomously with control and responsibility for project direction and outcomes (Brewer et al., 2020; Kokotsaki et al., 2016; Piggott & Winchester-Seeto, 2020).
13. Student teams have individual and group accountability, for example, peer assessment (Brewer et al., 2020; Clark et al., 2018; Johnson & Johnson, 2009).
14. Group processing within student teams, for example, reflection and subsequent adjustments (Brewer et al., 2020; Johnson & Johnson, 2009).
15. Peer feedback between teams (Gokcora, 2021).

Each of the modes of delivery was in turn assessed against these Principles of Good Practice to determine their effectiveness using an evaluation matrix (Table 14.3). For ease of comparison, and to tease out the major differences, face-to-face was compared directly with online, while intensive was compared separately with the trimester course.

Two measures were used to appraise the delivery modes, effectiveness of delivery (for which the abbreviation Del is used), and effectiveness for student engagement (for which the abbreviation SEn is used). Effectiveness of delivery (Del) is a measure of the quality of the curriculum, while effectiveness for student engagement (SEn) is ‘an indicator of the quality of the student experience’ (Redmond et al., 2018, p. 183).

The evaluation took into account the other aforementioned factors related to partners and students. For example, for face-to-face versus online, other factors included ease and reliability of online connectivity for domestic and international students, time-zone differences for partners and students, versatility and usability of learning management systems, and partner preferences/limitations for online affecting virtual engagement of partners. The influence of the size of the student cohort and number of partners was considered separately.

In rating each mode of delivery against the Good Practice Principles, the authors utilised a combination of course documents (e.g. course outline, as well as activity and assessment instructions) and qualitative student feedback captured in university-administered course surveys, and drew upon their reflections from having designed and taught the course. The appraisal and star rating system used was as follows:

- Del = Effectiveness of delivery

Rating: *** Very effective delivery; ** Moderately effective delivery; * Somewhat effective delivery

- SEn = Effectiveness for student engagement:

Table 14.3 Delivery modes evaluation matrix

Good practice principles (Intended curriculum)	F2F		Online		Intensive		Trimester- long	
	Enacted and experienced curricula							
	Del	SEn	Del	SEn	Del	SEn	Del	SEn
Project-based learning								
Real-world, authentic complex projects	***	***	***	***	***	***	***	***
Co-designed project brief	***	***	***	***	***	***	***	***
Project outcomes presented to partners (oral presentations with feedback)	***	***	**	**	***	***	***	***
Project outcomes presented to partners (written report with optional feedback)	***	***	***	***	***	***	***	***
Student teams work autonomously	***	***	***	***	***	***	***	***
Project-based WIL								
Ongoing coaching, mentoring, feedback from partners throughout the course	***	***	**	**	***	***	**	**
Ongoing coaching, mentoring, feedback from teaching staff and project advisors throughout the course	***	***	**	**	***	***	**	***
Scaffolded skill and knowledge development	***	***	***	***	***	***	**	**
Reflection embedded throughout	***	***	**	**	**	**	***	***
Safe space for students to develop reflective skills and resilience	***	***	*	*	**	**	***	***
Interpersonal and small group skills are actively taught and developed	***	***	***	***	***	**	**	***
Interdisciplinary approach								
Students from different disciplines work together	***	***	***	***	***	***	***	***
Teamwork and peer learning								
Student teams have individual and group accountability	***	***	***	**	***	***	**	**
Group processing within student teams	***	***	*	**	***	***	**	**
Peer feedback between teams	***	***	**	***	***	***	**	**

Rating: *** Highly effective for student engagement; ** Moderately effective for student engagement; * Somewhat effective for student engagement

Analysis

The analysis shows interdisciplinary and project-based learning are equally effective for all modes of delivery. The only exception is online delivery of project outcomes via presentations to the partner, which is related to the vagaries of connectivity, and where students were unable to see the audience reaction.

Online delivery was generally rated lower against the principles underpinning project-based Work Integrated Learning and teamwork and peer learning for both effectiveness of delivery and student engagement. This is related to three main issues: internet reliability and connectivity, a more formal atmosphere, and difficulties with online communication. The degree and reliability of connectivity impacts many aspects of student learning. In particular, it exacerbates difficulties in student interactions, especially when videos must be turned off to improve connectivity, affecting both teamwork and working with project advisors. This issue and partner communication preferences also influence how well and how often partners interact with students. Poor connectivity also affects the participation of some students in synchronous, full-class activities, for example, breakout rooms, whiteboards, and polls, echoing other studies in Australia and the United States (Means & Neisler, 2021; Stone & Davis, 2020).

Lack of student visibility due to poor or unreliable connectivity also affects teaching. This issue relates especially to the teaching of reflection, more easily accomplished when individual reactions can be seen. Similarly, not being able to see students affects the ability of experienced teachers to read the room and adjust their teaching according to the class reaction.

In this study we found that the online environment significantly shapes interpersonal communication in myriad large and small ways. Online interactions are often more formal, for instance, with less opportunity for spontaneity and fun than in a face-to-face classroom. With few

possibilities for informal gatherings peer feedback is more difficult to implement as students do not know classmates outside of their own teams. Overall, online interpersonal communication relies on a very different skill set to in-person communication, and while this allows students to develop these new skills, communication takes more time, and it is more difficult to engender trust between students, and between students and project advisors. Online communication can inhibit building safe spaces for discussion and for group processing in teams, resulting in more misunderstandings between team members. Students frequently comment on these misunderstandings and consequent difficulties in their written reflections.

In general, trimester-long offerings yielded lower ratings than intensive mode, but there were some variations. Trimester-long course offerings have fewer synchronous hours than the intensive mode. This means there is less time available for partners and project advisors to work with students. There is also less time for learning reinforcement of skills, peer feedback, and for project advisors to troubleshoot any teamwork-related issues. One advantage of trimester-long course offerings is the longer time span over which to develop skills, especially reflection, and more time for students to think between classes. This can also contribute to a less stressed environment in which to develop feelings of safety and trust, with potentially significant impact on teamwork.

Discussion and Final Reflections

Beyond the specifics of the evaluation of this adaptive curriculum design for project-based Work Integrated Learning, several key learnings are clearly transferable to a post-COVID world. The authors plan to continue the development of virtual Work Integrated Learning, opportunities as online learning will surely continue to feature as an important mode of course (and degree) delivery alongside face to face (Gupp et al., 2022).

Firstly, a fully online, largely synchronous learning environment, with a mixed cohort of domestic and international students, confers many benefits in enabling a broader, global perspective in developing cultural

awareness, knowledge acquisition, and problem-solving. However, this becomes complicated when international students are physically located in their home countries within different time zones, resulting in some being required to start classes very early in the morning while others need to work late at night. In the case of Work Integrated Learning, the challenge of different time zones also affects scheduling when partners are sited overseas.

A second factor is class size, with even moderately large numbers (more than 40) limiting the number of options for class-based activities on an online platform. Accessibility to online class activities, for example, breakout rooms and whiteboards, can also be negatively impacted by internet connectivity, a problem amplified by large classes and older versions of hardware and software. Combined, there is a cascade of effects as student-instructor and student-student interactivity are impacted, sometimes severely, especially when videos are turned off to reduce strain on the internet connection. Such limitations can diminish the advantages of peer learning where students 'take an active role in the process of knowledge acquisition as they participate in discussions, search for information and exchange opinions with their peers' (Gokcora, 2021, p. 2).

Thirdly, the authors had cause to reflect on the differences in equity of access afforded by face-to-face versus online learning. On the one hand, providing practice-based courses like Work Integrated Learning online creates greater equity of access for students who might otherwise experience barriers to undertaking such opportunities in a face-to-face environment. Such barriers might include 'more "visible" or obvious needs such as disabled, [and] ESL, and ... less obvious or "invisible" barriers such as mental health issues and those with parallel work and/or carer responsibilities' (Sachs et al., 2017, p. 25). However, fully online courses and related practice experiences can prove challenging or even inaccessible to students with poor internet connectivity. A survey conducted by Stone and Davis (2020) of students in rural and remote locations in Australia evidenced the problem of slow and/or intermittent internet connection. Almost two-thirds of the students surveyed indicated that their internet was insufficient for their studies with some unable to access the internet at all from home. Problems included inability to access or download materials and watch lectures and interruptions in assessment tasks. The

study highlights access to reliable internet as a key equity issue for education providers, with poor internet connectivity being a significant barrier to university study. With an eye to the ongoing development of online learning, educators need to strive for a balance between fostering student engagement through interactivity between students, university staff, and partners and considering the impact on students who are unable to connect and participate fully.

All of these factors in turn highlight the importance of student engagement as a feature of course design and delivery. As Redmond et al. (2018, p. 183) have noted, this has a ‘significant influence on student outcomes’ in both in-person and online learning environments. The results of the Australian Government’s 2020 graduate Student Experience Survey (Australian Government, 2021) support this argument. The survey results show an overall reduction in student ratings of their experience of universities having adapted their teaching and learning arrangements in rapid response to the COVID-19 pandemic. However, the most severe decline in student satisfaction was in relation to Learner Engagement, particularly in relation to fewer opportunities to interact with other students and to work with other students as part of their study. This highlights the need for all aspects of student engagement—social, cognitive, behavioural, collaborative, and emotional (Redmond et al., 2018)—to be carefully considered in any curriculum design, but particularly for online courses.

Development of the authors’ Principles of Good Practice has enabled the creation of an evaluation framework that can be used to assess the efficacy of the adaptive curriculum, not only for the course assessed in the case study but for any project-based Work Integrated Learning course. This framework also supports the careful adaptation of the course to different modes of delivery and allows a mindful accommodation of the myriad factors that intercede between what we as educators design and what students experience. After all, what students actually experience is ultimately the most important influence in learning.

Writing this case study afforded the authors the opportunity to revisit their teaching philosophies and confirm the emphasis on enabling students to develop skills and attributes beyond content and knowledge acquisition, to develop their agency, and to develop their abilities as

self-regulated and self-directed learners. Key to these endeavours is taking both a holistic view of education and nurturing the reflective practitioner, along with ensuring engagement and interactivity is embedded in the course design. Whilst technology has enabled greater access for many, neither access nor its full benefits are universal. For this reason, technology must remain in the service of educators, who in turn must never lose sight of the need to always place student learning and well-being at the centre of all curriculum design and delivery.

References

- Australian Government. (2021). 2020 SES National Report. Canberra, Australian Government Department of Education, Skills and Employment. Retrieved from <https://www.qilt.edu.au/qilt-surveys/student-experience>
- Brewer, M. L., Ferns, S., Lewis, S., Childers, J., & Russell, L. (2020). *Interdisciplinary project based work-integrated learning: The Australian good practice guide*. The Australian Technology Network.
- Clark, M., Merrick, L., Styrib, J., Dolowitz, A., Douris, C., Madeka, K., Bender, H., Johnson, J., Chapman, J., Gillette, M., O'Swyer, B., Grogan, J., Brown, T., Leonard, B., Rongerude, J., & Winter, L. (2018). *Off to On: Best practices for online team-based learning™*. Team-Based Learning Collaborative.
- Edwards, E., Perkins, K., Pearce, J. Hong, J. (2015). *Work Integrated Learning in STEM in Australian Universities*. Australian Council for Educational Research.
- Gokcora, D. (2021). Benefits of Collaborative Online International Learning Projects. *Academic Letters*, Article 202. Retrieved from 10.20935/AL202
- Gupp, N., Verpoorten, D., Boud, D., Lin, L., Tai, J., & Bartolic, S. (2022). The post-COVID-19 future of digital learning in higher education: views from educators, students, and other professionals in six countries. *British Journal of Educational Technology*, 00, 1–16. <https://doi.org/10.1111/bjet.13212>
- Hanney, R. (2021). Making Projects Real in a Higher Education Context. In D. A. Morley & M. G. Jamil (Eds.), *Applied Pedagogies for Higher Education*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-46951-1_8
- Johnson, D. W., & Johnson, F. (2009). *Joining together: Group theory and group skills* (10th ed.). Retrieved from <https://www.worldcat.org/title/joiningtogether-group-theory-and-group-skills/oclc/798982044>

- Kay, J., Ferns, S., Russell, L., Smith, J., & Winchester-Seeto, T. (2019). The emerging future: Innovative models of work-integrated learning. *International Journal of Work-Integrated Learning, Special Issue*, 20(4), 401–413.
- Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving Schools*, 19(3), 267–277. <https://doi.org/10.1177/1365480216659733>
- Lim, L., Andrew, J., Lewis, S., & Gao, J. (2018). Interdisciplinary teamwork in an authentic project-based learning environment. In D. Wache & D. Houston (Eds.), *Research and Development in Higher Education: (Re)Valuing Higher Education* (Vol. 41, pp. 1–13).
- McRae, N., & Johnston, N. (2016). The development of a proposed global work-integrated learning framework. Special Issue: Defining and Advancing Cooperative and Work-Integrated Education. *Asia-Pacific Journal of Cooperative Education*, 17(4), 337–348.
- Means, B., & Neisler, J. (2021). Teaching and learning in the time of COVID: The student perspective. *Online Learning*, 25(1), 8–27. <https://doi.org/10.24059/olj.v25i1.2496>
- Mergendoller, J. R., Maxwell, N. L., & Bellissimo, Y. (2006). The effectiveness of problem-based instruction: A comparative study of instructional method and student characteristics. *Interdisciplinary Journal of Problem-based Learning*, 1, 49–69. <https://doi.org/10.7771/1541-5015.1026>
- Piggott, L., & Winchester-Seeto, T. (2020). Projects of Consequence: Interdisciplinary WIL projects designed to meet the needs of partners and students. *Journal of University Teaching and Learning Practice*, 17(4), 1. Retrieved from <https://ro.uow.edu.au/jutlp/vol17/iss4/9/>
- Redmond, P., Heffernan, A., Abawi, L., Brown, A., & Henderson, R. (2018). An online engagement framework for higher education. *Online Learning*, 22(1), 183–204. <https://doi.org/10.24059/olj.v22i1.1175>
- Rowe, A. D., & Winchester-Seeto, T. (2022). Chapter 9. Support for student learning in work-integrated learning: A holistic framework. In S. Ferns, A. D. Rowe, & K. E. Zegwaard (Eds.), *Advances in research, theory and practice in work-integrated learning: Enhancing employability for a sustainable future* (pp. 96–106). Routledge.
- Rowe, A., & Zegwaard, K. (2017). Developing graduate employability skills and attributes: Curriculum enhancement through work-integrated learning. *Asia-Pacific Journal of Cooperative Education, Special Issue*, 18(2), 87–99.

- Sachs, J., Rowe, A., & Wilson, M. (2017). *2016 Good Practice Report—Work Integrated Learning (WIL)*. Department of Education and Training. Retrieved from https://ltr.edu.au/resources/WIL_Report.pdf
- Shardlow, K. (2015). *Best practice clinical learning environments: Overview of the evidence and available resources*. Queensland Department of Health. Retrieved from https://www.health.qld.gov.au/__data/assets/pdf_file/0029/693335/cle-review.pdf
- Smith, C., Ferns, S., & Russell, L. (2016). Designing work-integrated learning placements that improve student employability: Six facets of the curriculum that matter. *Asia-Pacific Journal of Cooperative Education*, 17(2), 197–211.
- Stone, C., & Davis, M. (2020). New evidence: Stark inequity of online access for rural and remote students. In *EduResearch Matters*. Australian Association for Research in Education. Retrieved from <https://www.aare.edu.au/blog/?p=5524>
- University of New South Wales. (2019). Work Integrated Learning (WIL) at UNSW. Retrieved from <https://www.wil.unsw.edu.au/>
- Winchester-Seeto, T. (2019). Quality and Standards for Work Integrated Learning. Commissioned Report by the Australian Council of Deans of Science. Retrieved from <https://www.acds-tlcc.edu.au/wp-content/uploads/sites/14/2019/03/Winchester-Seeto-Literature-Review-Quality-and-Standards.pdf>
- Winchester-Seeto, T., Rowe, A. D., & Mackaway, J. (2022). Effective supervision: A key consideration in work-integrated learning. In S. Ferns, A. D. Rowe, & K. E. Zegwaard (Eds.), *Chapter 8. Advances in research, theory and practice in work-integrated learning: Enhancing employability for a sustainable future* (pp. 85–94). Routledge.



15

Clumsy or Competent? The Social and Cultural Dimensions of Using Blackboard Collaborate at the University of Jeddah in Saudi Arabia

Saad Z. Alshehri

Background and Research Context

COVID-19 has posed significant challenges to the Saudi higher education system, which had to make an abrupt and unplanned shift from traditional learning to remote instruction and learning (Khalil et al., 2020; Müller & Goldenberg, 2020). At the core of this recent change to remote instruction is the nation's status as a highly conservative and homogeneous society and this sudden move is having social ramifications (Al Lily et al., 2020). This is because religion and language (Arabic) play a strong role in shaping social norms, values and beliefs in Saudi Arabia (Hamdan, 2014; Maryam, 2018).

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Recent reforms have focused on educating the citizens and training them in multiple disciplines, but faculty members in the country lack training, do not embrace innovative pedagogical approaches and have an overwhelmingly negative attitude towards the use of education technology (Al Dossari, 2020; Allmnakrah & Evers, 2020). They not only have preconceived notions and ‘culturally blind’ attitudes but also teach under the ‘fallacy of homogeneity’ (Nie et al., 2013, p. 74). A robust chemistry curriculum has to emphasise the understanding of concepts rather than just memorisation and has to be based on constructivist and inquiry-based pedagogical practices, for example, the development of critical thinking and problem-solving skills (Al Ghamdi & Al Anazi, 2020; Elyas & Picard, 2018). However, the Saudi education system is still based on didactic methods of teaching and learning (Elyas & Al-Ghamdi, 2018). This poses a challenge to Saudi educators who are used to teacher-centred approaches for delivering science education (Al Ghamdi & Al Anazi, 2020). Research claims that teacher-centred instructors resist or hesitate to change their pedagogical approaches or embrace constructivist instruction (Sawant & Rizvi, 2015; Nie et al., 2013). This calls for a change in attitude towards learner-centred pedagogy (Otara et al., 2019; Sawant & Rizvi, 2015).

The research setting is the University of Jeddah in Saudi Arabia which has more than 21,000 students enrolled in 21 colleges (University of Jeddah, 2018). Until the outbreak of COVID-19, the university had been using blended learning, by combining virtual learning environment and course management systems (Unnisa, 2014). Social distancing and movement restrictions have forced educators at this university to exclusively migrate to virtual online learning delivery systems such as Blackboard Collaborate in order to sustain education during the crisis (Alturise, 2020; Elsamanoudy et al., 2020).

This paper explores the extent of quality education, such as fostering collaborative and self-regulated learning, by Blackboard Collaborate during the pandemic. The main focus is to identify educators’ pedagogical orientations for using Blackboard Collaborate to impart chemistry education, challenges the faculty and students faced, and to highlight how they could overcome the barriers. Therefore, this case study

- i) Investigates the learning culture in Saudi Arab's higher education and faculty members' preparedness for using Blackboard Collaborate during the COVID-19 pandemic.
- ii) Explores how the educational potential of Blackboard Collaborate relates to the realities of its use for teaching chemistry and academically supporting self-regulated learning.
- iii) Assesses if faculty members and students are most negatively impacted by their choice of Blackboard Collaborate to support self-regulated learning.
- iv) Provides recommendations for integration of Blackboard Collaborate for transforming culturally influenced identities and supporting learning strategies that would improve self-regulated learning.

Learning Culture in Saudi Higher Education

Instructional approaches in Saudi higher education foster learning based on internal values. The chemistry and biochemistry curricula at the University of Jeddah is described as traditional and mainly teacher-centred, which includes traditional lectures, practical sessions and memorisation of content (Elsamanoudy et al., 2020; Sabbagh et al., 2020). The faculty members reinforce passive learning cultures and most students have not been exposed to interactive learning, or taught how to regulate learning on their own, or make self-assessments (Al Amoudi et al., 2018). Another limitation is digital skills which has consistently plagued e-learning in Saudi Arabia (Al Asmar & Khan, 2014; Al Jaber, 2018). Research claims that passive instructors with limited digital skills do not have full control of the technology and are not capable of replacing a passive teaching methodology or integrating passive approaches with a genuine active learning method (Laine & Nygren, 2016). Moreover, faculty members do not follow constructivist approaches in their teaching (Al Amoudi et al., 2018). This poses a challenge to the management of the University of Jeddah who have to make realistic efforts to revisit and modify the traditional curriculum and make the transfer to remote learning platforms (Al Jaber, 2018). Although changing a pre-existing dominant culture is very challenging, new technologies such as collaborative learning tools can support students to learn

in a self-regulated way in a responsive open learning environment (Otara et al., 2019; Sawant & Rizvi, 2015).

The value of the technological affordances (e.g. usability, convenience) of Blackboard Collaborate has been widely acknowledged. It is claimed to be student-centred and a good medium for communication, sharing of information, peer learning and for assessment (Bodey et al., 2016; Elsamanoudy et al., 2020). However, participation is key for the creation and sharing of ideas rather than for 'consuming' or absorbing it (Davis et al., 2017). The participatory, communal nature of Blackboard Collaborate is aligned closely with the essential qualities of how faculty members teach and students learn, for instance, the practices of generating, sharing and collaborating; supporting self-regulated learning; and culturally constructing knowledge (Moonsamy & Govender, 2018; Turnbull et al., 2020; Wong et al., 2019).

Potential of Blackboard Collaborate for Supporting Self-regulated Learning

It is evident from research that Blackboard Collaborate has the potential to enable learning to take place in many ways, and that it supports socio-constructivist modes of learning and cognitive development that are profoundly social, cultural and participatory in nature (Hodges & Grant, 2015). One of the common assumptions of social constructivist learning theories is that self-regulation is key for effective learning (Vrieling et al., 2018). Self-regulation is fostered in online learning environments through collaboration whereby students set goals and then make efforts to regulate and control their learning, directed by their objectives as well as the associated inhibiting and enabling factors in a particular context (Vrieling et al., 2018; Wandler & Imbriale, 2017). However, successful knowledge building is possible only if teachers scaffold learners' self-regulation skills to optimise learning or give control to students gradually (Vrieling et al., 2018; Wandler & Imbriale, 2017). These types of support can come in the form of cues or prompts and feedback or a combination of all these methods (Wong et al., 2019).

A recent study found that Blackboard Collaborate was not widely accepted by faculty members and students at a university in Saudi Arabia (Alturise, 2020). Over 59% of faculty members were reluctant to use it based on the belief that traditional approaches were better than online courses and that it was not possible to carry out practical laboratory experiments. Likewise, a majority of the students (77%) believed it was difficult to have online discussions which in turn reduced their problem-solving abilities (Alturise, 2020). The results suggest that faculty members have to play active roles by using best practices in online instruction and adapt their instruction based on the context and the needs of the students in specific learning situations (Wandler & Imbriale, 2017).

Preparing Faculty Members to Tackle Cultural Barriers

Cultural barriers are an obstacle to proper spread of education. The Saudi society is reluctant to adopt remote learning due to the suspicions of this form of instruction (Al Jaber, 2018). Therefore, this paper argues that while implementing Blackboard Collaborate and imparting remote instruction, the delivery of instruction must be in line with cultural situations existing in the receiving country. This implies that policymakers must simply not take chemistry lessons from the US or UK and make them available to Saudi students. Faculty members and students face a difficult time adapting to and engaging with online learning environments because elements of a foreign curriculum or education system raise awareness of the differences between foreign educational culture and local belief systems (Al Jaber, 2018).

The faculty members are required to understand how issues of culture intersect with the technology-enhanced education and how culturally relevant modes of communication can pave the way for improved learning (Brown, 2019). This is because an individual's subjective norms and beliefs (instructor readiness and student readiness) influence how one teaches and learns in online learning environments as compared to face-to-face settings (Alhamami, 2018). It has been acknowledged that remote learning can be challenging for students because of the impact of norms and values on limited non-verbal communication (Khalil et al., 2020; Manusov, 2016). This is due to the emphasis that Saudi Arabian culture

places on body language, facial cues or eye contact and tone of voice (Khalil et al., 2020). Culturally relevant pedagogy and modes of communication are essential (Hamdan, 2014) especially when significant number of academics teaching at the University of Jeddah are expatriates and hail from countries that are relatively progressive nations and digitally readier compared to their counterparts in Saudi Arabia.

In online environments, where personal interaction between instructor and student is reduced or absent, there is the need for faculty members to maintain a strong instructor presence and play a significant role in teaching students to self-regulate learning (Gallant, 2020). Research has also demonstrated that Blackboard Collaborate is more beneficial for learning because the presence of teachers helps in the delivery of content, in better organisation and in facilitating self-regulation through discussions and feedback (Tseng, 2016). However, the instructional presence of faculty members cannot be strong if they use too much of live or recorded lectures, which can be overwhelming for the students (Rapanta et al., 2020), as is the case at the University of Jeddah.

Research Design: Qualitative Case Study

A case study with an interpretative methodological approach was carried out with the faculty members and students from the Department of Chemistry at the University of Jeddah in Saudi Arabia. The case examined the use of Blackboard Collaborate with the faculty members and students and if they are prepared to tackle cultural barriers.

Participants were purposively sampled, and participation was completely voluntary. The participants were ensured of the anonymity, confidentiality and security of their responses. In order to maintain anonymity participants were referred to as LM1 (Lecturer Male 1), LF1 (Lecturer Female 1), SM1 (Student Male 1), SF1 (Student Female 1) and so on. Ethical approval was sought from the Research Ethics Committee at the University of Jeddah. Semi-structured interviews were used to gather qualitative data from 4 faculty members and 4 students. The interview schedule was developed from relevant literature. Interview transcripts were analysed thematically (Braun & Clarke, 2006).

Results and Discussion

The thematic analysis resulted in ten findings and four overarching themes. The key findings are discussed within three key syntheses, which continuously interact with the research objectives, data and theory.

Synthesis 1: Learning Culture in Saudi Arab's Higher Education and Preparedness of Faculty Members to Use Blackboard Collaborate

The pedagogical practices of the faculty members and the attitudes of the students developed overtime have affected the teaching and learning culture. The results suggest that one of the reasons was the participants' preference for teacher-centred didactic methods. Faculty members believed they should deliver instruction in the 'usual' (SF2) traditional manner as there was 'no difference' (SF1) when Blackboard Collaborate was used. The students corroborated the faculty members' statements by mentioning that they preferred 'face to face' instruction (SM1) and that 'attending traditional classes was more effective and engaging' as 'our faculty members are better using traditional methods' (SM2). One student considered it as 'useless, time consuming' and felt that it would 'not prepare us for life' (SF2).

The faculty members were not fully knowledgeable about constructivist teaching approaches such as scaffolding. It illustrates that they did not understand learning theories. All the four faculty members had never scaffolded student learning and had only used passive 'lectures and discussion' as well as 'loads of homework' (LF1). None of the students had also heard about instructional scaffolding. Another indicator of teacher-centred didactic methods was the faculty members' unwillingness to change their teaching approaches and the students' emotional reactions and feelings associated with it:

lecturers and professors have difficulty in teaching us online or deliver the lectures effectively. All they do just send us links for the experiments on YouTube. (SM1)

All lectures are recorded ... our lecturers put too much pressure on us by bombarding us with too many assignments and activities. This is really very stressful. (SF1)

They find it difficult to evaluate students work because they think we might cheat as we are not in front of teachers. (SM1)

Prompts and cues to this interview response suggest the chemistry curriculum is packed with so much content that faculty members just instruct students to do assignments and simply commit facts to memory. The faculty members also feared that students might plagiarise online content. This is in line with literature which suggests that faculty members' preference for teacher-centred didactic methods is due to their reluctance to change their existing methodologies (Nie et al., 2013; Sawant & Rizvi, 2015).

The faculty members' attitude to using Blackboard Collaborate and other educational technologies was passive. Instead of using active methods they provided 'students with links' (LM2) to online videos and 'recorded all lectures so students can come back any time and listen to the recorded lessons' (LF1). They were unable to embed 'PowerPoint presentations' (LF2) into Blackboard courses. The students attributed this to 'lecturers' lack of motivation to teach online' (SM1) and the faculty members' preference for 'communicating using social media, for instance WhatsApp, Instagram' and 'through email' (SM2). This finding corroborates the claims of Laine and Nygren (2016) that faculty members were not able to move from passive to active technology users because of their lack of control of the learning platform.

Another key finding was the pedagogical theme 'lack of strong or live teacher presence' (Rapanta et al., 2020). The students wanted their faculty members to have robust online presence and provide immediate feedback. Although faculty members claimed that they 'check if all students are participating in online classes' (LM1) and they used 'social media to communicate with them' (LM1), they were unable to 'manage students' (LM1) and could not 'prevent cheating' (LM1). Their lack of online presence was amplified in the following excerpt:

We leave it for students if they want to get feedback ... they have to ask. ... Regarding, the assignments we give them grades and then if any students want to disuses why she got it wrong we can help. (LF2)

The students were frustrated due to ‘the enormous number of assignments’ (SF1). They found it ‘difficult to communicate’ with the faculty members (SF2) and were ‘annoyed’ due to the lack of ‘comments’ (SM1) or ‘feedback after assessment’ (SF1). In short, they claimed that there was ‘no presence of lecturers’ (SM2) in the online environment. This finding contradicts the claims of Gallant (2020) and Rapanta et al. (2020) that maintaining teacher presence in an online environment is of utmost importance.

Another finding was associated with the theme ‘lecturers’ misconceptions about self-regulated learning’. The expectation of the faculty members was that responsible students would automatically learn if they were provided with recorded lectures and online videos or if they were assigned homework. According to one lecturer:

We give links to our students and leave them to learn from them ... learning chemistry using remote learning is a chance for responsible students. (LM1)

Another faculty member acknowledged that teaching chemistry:

is really very difficult and it is annoying to ask students every time wither they are following us and learn or not. (LF1)

This finding is significant because literature suggests that faculty can promote collaborative work and self-regulated learning among students by integrating technology only if there are significant changes in instructors’ attitude and the ways in which they interact with students (Otara et al., 2019; Sawant & Rizvi, 2015).

The faculty members opined that students lacked motivation as they were not ‘serious about their study’ (LM1) and their participation or ‘response rate is still below our expectations’ (LM2). One faculty member also added that only those who were notable and studious used the learning platform and engaged with the material and tasks: ‘few students do

engage and collaborate ... who are the distinguished students' (LF1). The students corroborated the faculty members' views by mentioning that only 'some students fully participate' (SM1). Another student felt that the reason why they lacked motivation was because they had to 'work alone' (SM2). The negative attitude formation can be a result of students' preference for didactic methods and faculty members feeling the need to be in complete control of a class. Faculty members need to accept that the relationship between teaching and learning is now different and that they have to change their attitude by aiming to shift from teacher-centred to learner-centred pedagogy (Otara et al., 2019).

Synthesis 2: Potential of Blackboard Collaborate and Its Use for Teaching Chemistry and Supporting Self-regulated Learning

The use of Blackboard Collaborate was moderately received by the faculty and students. The faculty members identified usability, convenience and other aspects that they felt were instrumental to the successful use of the platform. The theme that emerged from the following excerpts was 'technological affordances':

Blackboard offers easy communication with students. It is possible to record lectures. Also, to assess them online. It is safe. (LM1)

It improves collaboration. (LM2)

A female faculty member elaborated:

Blackboard enables accommodating greater numbers of students which was difficult as compared to traditional instructional methods. (LF1)

Other affordances included the use of 'discussion forums for students to exchange their experiences' (LF2).

The students also valued how Blackboard Collaborate made it easy to access all the material that was required for learning chemistry. They also valued the opportunity to use the platform at any time. According to a student, it is

effective and engaging ... the lectures are these lectures are pre-recorded which we can access any time and we do not have to see our lecturers ... so we can talk with confidence. it saves time and effort. (SF1)

The students appreciated the remote learning environment:

I can communicate effectively with my lecturers and my friends. ... I trust lecturers in this space. (SF1)

I reckon it is a friendly, trustworthy and secure learning environment ... it is useful for learning. (SF1)

It helps build trust and fosters positive working relationships with lecturers (SF1).

I found learning in groups useful. (SF2)

This finding suggests that as virtual and hybrid remote instruction continues, Blackboard Collaborate can help foster positive relationships that are required to keep students engaged in learning.

Synthesis 3: Constraints and Challenges for Faculty Members in Using Blackboard Collaborate to Support Self-regulated Learning

Faculty members and students showed some concerns about accessibility which they attributed to internet connectivity. The students were 'frustrated because we missed lessons or part of lectures' (SF2). A significant finding was the absence of virtual laboratories and the need for a simulated learning environment. Students were 'unable to carry out experiments' or learn through 'simulations' (LM2). They felt that Blackboard had drawbacks and therefore they had to use 'resources available on YouTube because it contains detailed experiments' (LM1) or other 'other software' (LF2).

The faculty members were not aware that they could infuse learning experiences through a technologically rich simulated learning environment by utilising strategies that would allow students to complete laboratory experiments online and have a conceptual understanding of

chemistry. The students (SM1; SM2) also mirrored the same theme as the faculty members but the female students elaborated that:

Although our lecturers provide us video clips for the experiments, I really doubt that we deeply understand theories and concepts. (SF1)

However, as we don't do any practical experiments as we don't have access to laboratories and therefore no safety concern. (SF2)

Safety is important. However, I hope they encourage use to carry out experiments at homes. (SM2)

One key finding is associated with the theme 'culturally sensitive'. The distinct presence of a conservative culture is a key feature of this. According to one lecturer:

Most of the curriculum is in English language and students have trouble understanding key concepts. (LF1)

This suggests that students whose cultural affiliation is tied to non-English may misunderstand topics or terminology. It was also not culturally sensitive as 'some female students are unwilling to speak because they are shy or lack confidence' (LF1) when using webcams. The lecturer attributed this constraint to 'religious restrictions' (LF1). The following quotes are typical of students who also considered the learning platform to be culturally sensitive:

The materials are in English and most of us have poor English language skills. (SF1)

I can't understand or engage with classes such as Organic Chemistry because of nature of the course and the use of English as a medium of instruction. (SF2)

In Saudi Arabian higher education, remote instruction is more prone to cultural conflicts than traditional settings. This is because instructors in these didactic environments not only use pedagogical approaches that are foreign to, and mostly unknown but also interact in Arabic with students who have not entirely removed themselves from their native

culture. Therefore, students found it ‘challenging and frustrating’ because they did not have enough skills to collaborate (SF2) and lacked the ‘the confidence to discuss things with lecturers’ (SF2). Moreover, parents consider this form of learning ‘worthless’ (SF2) and ‘useless’ (SM1). Consequently, students are ‘under pressure because it is new’, requires ‘skills’ (SM1) and needs more support from lecturers (SM2).

Lack of support was another finding as the following extracts illustrate:

We developed our skills based on our needs and our university has not provided adequate training. (LM1)

I hope the university will help us to use software to overcome the disadvantage in teaching practical aspects of the chemistry curriculum. (LM2)

The students’ reflections identified similar themes as the faculty members:

I want add that the university and our lecturers provide more support. (SF1)

The aforementioned excerpts provide some illustrative examples of the culturally sensitive nature of integrating Blackboard Collaborate to support self-regulated learning. Overall, the findings suggest a lack of culturally responsive teaching practices and inadequate teacher preparation.

Conclusion

This case study identified faculty members’ and students’ attitudes, culturally sensitivity and the need for culturally responsive pedagogy for influencing the possibility of success of Blackboard Collaborate as a learning platform. It concludes that the response to the use of the learning platform was mediocre. However, it represents significant and promising potential for its use for self-regulating the learning of chemistry in the future. The data showed that the university and the faculty had used traditional didactic methods and technology passively. They had not followed any innovative pedagogical approach. Although Blackboard Collaborate was integrated, faculty members used social media for

communication and feedback. The university neither followed any interesting policy to implement the technology nor provided support to students and faculty. The faculty preparation programmes for using the platform were also inadequate.

It is expected that educators will find the following suggestions useful when considering using self-regulated learning strategies for implementing Blackboard Collaborate.

- i) Faculty members should use the cultural knowledge, prior experiences and learning styles of students to make learning more appropriate and effective for them.
- ii) Faculty members' 'active presence' should include goal setting, monitoring, favouring collaborative learning and engaging students using scaffolds.
- iii) They should encourage small group discussion.
- iv) They should consider using simulated lab technologies to engage students in chemistry.
- v) They should acquire training, professional understanding and skills to become empowered so that they can develop self-regulated learners, for instance the use of constructivist approaches.

References

- Al Amoudi, A., Hassanien, M., Al Shawwa, L., et al. (2018). Introducing TBL in Clinical Biochemistry: Perceptions of Students and Faculty. *MedEdPublish*, 7(1), 26. <https://doi.org/10.15694/mep.2018.0000026.1>
- Al Asmar, A., & Khan, M. (2014). E-learning in Saudi Arabia: Past, present and future. *Near and Middle Eastern Journal of Research in Education*, 1(2), 82–95.
- Al Dossari, A. S. (2020). Vision 2030 and reducing the stigma of vocational and technical training among Saudi Arabian students. *Empirical Research in Vocational Education and Training*, 12(3), 1. <https://doi.org/10.1186/s40461-020-00089-6>
- Al Ghamdi, A. K. H., & Al Anazi, F. H. (2020). Process-Oriented Guided-Inquiry Learning in Saudi Secondary School Chemistry Instruction. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(12). <https://doi.org/10.29333/ejmste/9278>

- Al Jaber, A. (2018). E-learning policy in Saudi Arabia: Challenges and successes. *Research in Comparative & International Education*, 13(1), 176–194. <https://doi.org/10.1177/1745499918764147>
- Al Lily, A. E., Ismail, A. F., Abunasser, F. M., & Alhajhoj Alqahtani, R. H. (2020). Distance education as a response to pandemics: Coronavirus and Arab culture. *Technology in Society*, 63, 101317. <https://doi.org/10.1016/j.techsoc.2020.101317>
- Allmnakrah, A., & Evers, C. (2020). The need for a fundamental shift in the Saudi education system: Implementing the Saudi Arabian economic vision 2030. *Research in Education*, 106(1), 22–40. <https://doi.org/10.1177/0034523719851534>
- Alturise, F. (2020). Difficulties in Teaching Online with Blackboard Learn Effects of the COVID-19 Pandemic in the Western Branch Colleges of Qassim University. *International Journal of Advanced Computer Science and Applications*, 11(5), 74–81. <https://doi.org/10.14569/IJACSA.2020.0110512>
- University of Jeddah. (2018). Numbers of students and subjects at Jeddah University, [Online] Retrieved from: <https://www.uj.edu.sa/Pages-N162.aspx>
- Bodey, K., Ravaga, V., & Sloan, S. (2016) Preliminary exploration of student use of Blackboard Collaborate in fully online courses *Show me the Learning, ASCILITE Adelaide Nov 20-30, 2016*.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Brown, B. A. (2019). *Science in the city: Culturally relevant STEM education*. Harvard Education Press.
- Davis, M. L., Witcraft, S. M., Baird, S. O., & Smits, J. A. J. (2017). Learning Principles in CBT. In S. G. Hofmann & G. J. G. Asmundson (Eds.), *The Science of Cognitive Behavioral Therapy* (pp. 51–76). Academic Press. <https://doi.org/10.1016/B978-0-12-803457-6.00003-9>
- Elsamanoudy, A., Al Fayez, F., Alamoudi, A., & Hassanien, M. (2020). Enhancing students' engagement on using Blackboard as an online learning community tool in Clinical Biochemistry. *MedEdPublish*, 9(1), 71. <https://doi.org/10.15694/mep.2020.000071.1>
- Elyas, T., & Al-Ghamdi, A. A. (2018). A critical “positivist” analysis of Tatweer policy in Saudi Arabia. In A. W. Wiseman & P. M. Davidson (Eds.), *Cross-Nationally Comparative, Evidence-Based Educational Policymaking and Reform* (pp. 241–276). Emerald Publishing Limited.
- Elyas, T., & Picard, M. (2018). A brief history of English in Saudi Arabia. In C. Moskovsky & M. Picard (Eds.), *EFL in Saudi Arabia: New Insights into Teaching and Learning English* (pp. 78–92). Routledge.

- Gallant, J. (2020). The Importance of Maintaining Social Presence and Teacher Presence in an Online Classroom. In R. Power (Ed.), *Integration of Instructional Design and Technology to Support Rapid Change*. (e-Book), Pressbooks.
- Hamdan, A. K. (2014). The Road to Culturally Relevant Pedagogy: Expatriate Teachers' Pedagogical Practices in the Cultural Context of Saudi Arabian Higher Education McGill. *Journal of Education*, 49(1), 201–226.
- Hodges, C., & Grant, M. (2015). Theories to Support You: Purposeful Use of Learning Management System Features. In *Proceedings of Global Learn Berlin 2015: Global Conference on Learning and Technology* (pp. 481–486). Berlin, Germany: Association for the Advancement of Computing in Education (AACE). [Online] Retrieved from: <https://www.learntechlib.org/primary/p/150895/>
- Khalil, R., Mansour, A. E., Fadda, W. A., et al. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives. *BMC Medical Education*, 20, 285. <https://doi.org/10.1186/s12909-020-02208-z>
- Laine, T. H., & Nygren, E. (2016). Active and passive technology integration: a novel approach for managing technology's influence on learning experiences in context-aware learning spaces. *Technology, Pedagogy and Education*, 25(1), 19–37. <https://doi.org/10.1080/1475939X.2014.945475>
- Manusov, V. (2016). A history of research on nonverbal communication: Our divergent pasts and their contemporary legacies. In D. Matsumoto, H. C. Hwang, & M. G. Frank (Eds.), *APA handbook of nonverbal communication* (pp. 3–15). American Psychological Association. <https://doi.org/10.1037/14669-001>
- Maryam, S. (2018). Women's Representation in STEM Related Education and Careers: A Case Study of Female University Students in Saudi Arabia. Published Doctoral Thesis, Staffordshire University, United Kingdom. [Online] Retrieved from: <http://eprints.staffs.ac.uk/5825/>
- Moonsamy, D., & Govender, I. (2018). Use of Blackboard Learning Management System: An Empirical Study of Staff Behavior at a South African University. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(7), 3069–3082. <https://doi.org/10.29333/ejmste/91623>
- Müller, L., & Goldenberg, G. (2020). *Education in times of crisis: The potential implications of school closures for teachers and students: A review of research evidence on school closures and international approaches to education during the COVID-19 pandemic*. Chartered College of Teaching. [Online] Retrieved from: https://my.chartered.college/wp-content/uploads/2020/05/CCTReport150520_FINAL.pdf

- Nie, Y., Tan, G. H., Liao, A. K., Lau, S., & Chua, B. L. (2013). The roles of teacher efficacy in instructional innovation: Its predictive relations to constructivist and didactic instruction. *Educational Research for Policy and Practice*, 12(1), 67–77. <https://doi.org/10.1007/s10671-012-9128-y>
- Otara, A., Uworwabayeho, A., Nzabalirwa, W., & Kayisenga, B. (2019). *From ambition to practice: An Analysis of Teachers' Attitude Toward Learner-Centred Pedagogy in Public Primary Schools in Rwanda*. SAGE Open. <https://doi.org/10.1177/2158244018823467>
- Rapanta, C., Botturi, L., Goodyear, P., et al. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2, 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Sabbagh, H. J., Bakhaide, H. A., Abokhashabah, H. M., & Bader, M. U. (2020). Students' perceptions of the educational environment at Jeddah University Faculty of Dentistry (KAUFD): A cross sectional study. *BMC Medical Education*, 20, 241. <https://doi.org/10.1186/s12909-020-02165-7>
- Sawant, S. P., & Rizvi, S. (2015). Study of passive didactic teacher centred approach and an active student centred approach in teaching anatomy. *International Journal of Anatomy and Research*, 3, 1192–1197.
- Tseng, H. (2016). An exploratory study of students' perceptions of learning management system utilisation and learning community. *Research in Learning Technology*, 28, 2423. <https://doi.org/10.25304/rlt.v28.2423>
- Turnbull, D., Chugh, R., & Luck, J. (2020). Learning management systems: A review of the research methodology literature in Australia and China. *International Journal of Research & Method in Education*. <https://doi.org/10.1080/1743727X.2020.1737002>
- Unnisa, S. (2014). E-Learning in Saudi Arabia's higher education. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 4(2), 152–157.
- Vrieling, E., Stijnen, S., & Bastiaens, T. (2018). Successful learning: Balancing self-regulation with instructional planning. *Teaching in Higher Education*, 23(6), 685–700. <https://doi.org/10.1080/13562517.2017.1414784>
- Wandler, J. B., & Imbriale, W. J. (2017). Promoting undergraduate student self-regulation in online learning environments. *Online Learning*, 21(2), 1. <https://doi.org/10.24059/olj.v21i2.881>
- Wong, J., Baars, M., Davis, D., Zee, T.V.D., Houben, G., & Paas, F. (2019). Supporting Self-Regulated Learning in Online Learning Environments and MOOCs: A Systematic Review, *International Journal of Human-Computer Interaction*, 35(4-5), 356-373, <https://doi.org/10.1080/10447318.2018.1543084>.



16

Multimodality, Mediation and Communities of Practice: Developing a Sense of Belonging through Digital Communication Tools in a Final-year Journalism Course

Tito Ambyo and Janak Rogers

Introduction: The Changing Context of Journalism Education

Rapid media industry changes and innovations in digital technology have radically disrupted journalism and journalism education since the 1990s. For journalism educators, one of the most decisive changes in journalism that require changes in the way courses are structured and evaluated is the emerging new careers and opportunities for journalism students not only in journalism industries but also elsewhere. The skills to find, navigate, curate information and create compelling stories to deliver information via online platforms are skills in which students of journalism are trained; these are useful skills in a world facing challenges in misinformation and

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disinformation which have led to various opportunities such as in blogging and podcasting that Revers calls as the 'emergent hybridity of digital culture and journalistic professionalism' (Revers, 2016, p. 230). At the same time, the global growth of tertiary education in journalism has meant that scholarly attention to the ways in which journalism students are trained in universities has increased. In the middle of all these changes and disruptions, journalism educators and students are now working in an environment that Deuze (2006) has identified as having distinct modes: the 'follower' mode and the 'innovator' mode. While the follower mode focuses on journalistic mission to prepare students to become journalists in the traditional sense of the word, that is, work as a journalist as a freelancer or casual or full-time staff for media organisations, the latter mode sees journalism education as a development laboratory with differentiated missions that prepares students for a changing, complex future rather than a static present.

Journalistic innovations and practices can provide a useful contribution to the wider teaching scholarship on innovative learning within the context of the changing roles of higher education and its relevance to the student population. Journalism education has had to respond to the challenges brought about by rapid changes in digital technologies and the journalistic profession itself. In our effort to find a balance between the 'follower' and 'innovator' modes that respond to the needs of students in search of a career as well as the industry in search for innovations, journalism education might add to the existing scholarship on 'real world learning' in higher education (Morley & Jamil, 2020), especially in authentic curriculum design. In the sections that follow, we use examples of our experience as professional journalists and show how our approach, informed by our professional experiences, has helped us pivot three production-oriented journalism subjects in 2020 that included live television and radio broadcasts into fully online experience for the students when we went into hard lockdown during the COVID-19 pandemic in Melbourne, Australia. The three courses gained positive feedback from most of the students and a 'Best Innovation' award from the Journalism Education & Research Association of Australia in 2021, so it was a critically successful delivery of the courses that we would like to critically analyse and share.

In this chapter, we share a few themes that we have identified from a survey done with the students who completed the subjects. These themes vary, but they all revolve around the concept of belonging and professionalism: student ownership, online sociality, technological encouragement and the focus on staff. Following the findings where online communities find a sense of companionship through shared interests and contacts with peers in a clearly defined space and role and unique communal content (Rotman & Preece, 2010, p. 320) and the importance of multimodality of communication modes, we analyse the way in which we use a set of communication tools that are used in journalism industry in the classroom (Slack, Trello and Google Drive) to define a space of encounters and belonging that are 'situated within a number of nested and overlapping social systems' (Orlikowski, 2000, p. 411) that successfully engendered a sense of belonging and end-to-end ownership that manifested as increased engagement, satisfaction and, ultimately, learning. Finally, we highlight the importance of academics involved in online teaching to develop media skills to help them act effectively in a disrupted educational environment.

Overview: From Journalistic to Teaching Practices

The context of disruption in journalism as well as the increasing tension of the 'dual' modes of journalism education mentioned in the previous section is the context in which the three journalism subjects that are the focus of this chapter were produced and managed. The three subjects are all journalism subjects at RMIT University in Melbourne, Australia: Audio-visual Journalism; Journalism Innovation and Technologies; and Newsroom Practice. The first two are subjects in the one-year Graduate Diploma of Journalism course that are meant to be a 'fast-track' programme for people with non-journalism degrees to learn practical skills and be ready for a journalism career by the end of the year. Meanwhile, Newsroom Practice is a final-year course in the undergraduate journalism programme that is almost the culmination of the three-year degree course

where students are trained to produce news across a range of media in a deadline-driven environment.

All of the courses were designed to strike a balance between the ‘follower’ mode and ‘innovator’ mode of teaching, which grew from the wider RMIT University strategy that is reflected, for example, in this paragraph from RMIT’s marketing material of the communication programmes:

RMIT’s communication programs prepare you to succeed in the ever-evolving media landscape. Enhance your transferable skills, receive media training, and move fluently between the classroom, studio and workplace. (RMIT, 2021, our added emphasis)

This focus to give students the ability to adapt to an ‘ever-evolving media landscape’ and move from journalistic workplaces and studios and back to the classroom to discuss both practical and academic challenges of doing journalism has meant that the course coordinators, who are the authors of this chapter, introduced journalistic practices from their professional experience to their teaching, not only to teach students practical skills but also for the students to be introduced to the ‘feelings’ of being a journalist—the camaraderie, sense of mission and the cycles of journalistic production that are practised and analysed in class to help students decide what career paths they would like to follow after they graduated.

All these subjects are run like newsrooms with publishing calendars, studios and additional staff members booked in advance to run television and radio programmes, and they also have the newsroom flexibility and adaptability in which the relationship between students and lecturers is modelled after the relationship between editors and reporters. This means, for example, that some of the students who play a role as producers/leaders of the programmes are given some decision-making powers to decide what they will produce for their assessments and other students’ assessments. Furthermore, if there is a breaking news story that is deemed to be important enough for the students to respond to, class plans are changed through a consultative process between students and teachers.

It is in this context that the pandemic began to upend our teaching in these subjects in early March 2020, about two weeks into the 12-week semester. Melbourne was going into a hard lockdown and, as with many other universities, the sudden onset forced us to redesign our courses and adapt to online learning without any pause in the teaching itself. While we hoped that we could return to in-person teaching before too long, we knew that we needed to plan for any eventuality and redesign teaching and assessments that could work in either a remote or in-person environment. Since both (authors) have worked together closely in the past, and Janak is a tutor in Tito's course, we met to decide on a plan; the decision was made that instead of making it easy for the students, we would use the opportunity to utilise our professional experience working in remote newsrooms and create a space where we can do 'real journalism'.

As a part of creating this space, we chose to use a core suite of Slack, Google Drive and Trello to communicate, house our work and manage our projects respectively. These Online Collaborative Systems (OCS) have an established track record in the context of both journalistic newsrooms and academic learning and teaching (Bunce et al., 2018; Thomas et al., 2021). Henceforth, we refer to the trio collectively as the 'Newsroom OCS'.

As we began to go remote, students had considerable goodwill and understanding towards us as lecturers and were also just trying to adapt and absorb the magnitude of the changes they were seeing. That said, there was an obvious disappointment that the university experience was being diminished, and there was a fair amount of scepticism that the remote learning experience would be a meaningful substitute for learning in person—especially in our production-heavy Newsroom Practice subject, which prioritised gaining hands-on experience in producing across radio, podcasting, television and online.

Methods

This study is based on a small online survey with open-ended questions that we sent to the graduates of the programmes who completed the subjects. The decision to use an online survey was to give the former students

who chose to participate the ability to draft and write their answers in the mode that they, as trained journalists, are used to. The survey was also done instead of interviews because of our previous relationship that could have coloured the answers if they were done in person, and we waited for five months after graduation before conducting the survey to further allow participants to be more open and honest with their answers. Participants are also given the option to be anonymous, although no one took this option. We wrote eight open-ended questions that were designed to allow participants to look at their experience of studying journalism during COVID-19 lockdown from various perspectives. In total, 33 participants responded out of a total of 70 students. We then compiled the responses in a spreadsheet, and then coded them independently of each other before comparing our codes together. From the codes, we devised four themes that we use for further analysis, which we will discuss in the following sections.

Student Ownership and Relevance to Industry

When we made the switch to online learning, we felt that the Newsroom OCS allowed us the best chance to manage the basics of communicating with students, managing media and tracking project workflow. Furthermore, and arguably, equally importantly, they allowed students to have a sense of ownership and belonging with the OCS itself. A sense of belonging has long been viewed as not just an important pedagogical driver and metric (Walton et al., 2011; Wilson et al., 2018) but also as a fundamental human need (Baumeister & Leary, 1995). The aim was to create a virtual Community of Practice, which draws upon Wenger's seminal social account of learning (Wenger, 1998) and of others who argue that online learning environments qualify as CoPs. While virtual Communities of Practice have been criticised for being impersonal and disengaging (Fontinha & Gannon-Leary, 2008), we felt that with the right choice of tools, and by creating an inclusive, playful culture with those tools, students would feel comfortable—and even enjoy—engaging with the learning space.

Furthermore, given the natural scepticism many students felt about gaining a meaningful learning experience while remote, we also felt it important to move away from the university's prescribed learning management system (LMS), Canvas, and rely instead on OCS tools used in contemporary journalism industry, for example, Slack, Google Drive and Trello. This message of 'industry readiness' helped sell the importance of using the Newsroom OCS trio and helped with the buy-in from students. Throughout the class, especially as it became clear that we would not be returning to in-person learning and teaching, we repeatedly drew parallels between the adaptations in Newsroom Practice and those being made by working newsrooms around the world. The 'compromises' we had to make—recording and filming on our phones, conducting interviews by video call, suffering through Zoom calls and breakout rooms and so forth—were reframed as opportunities to mimic emergent industry-led practice. This positive message helped to offset the unavoidable truth that remote learning was, in most ways, an anaemic experience in comparison with being on campus, but we felt strongly that newsrooms around the world are adapting and thriving despite lockdowns and restrictions, and so must we. We told them, in short, this is not a drill. Furthermore, the production and online collaboration skills they pick up here are valuable in the long-term, regardless of whether or not we're living with pandemic restrictions.

Our survey results demonstrate the benefit of this approach. There was near universal support for the use of the Newsroom OCS and, crucially, many of the responses spoke to a sense of belonging that extends beyond the 'normal' sense of attachment one would expect to find from a suite of communication and project management tools, especially ones convened to hastily replace a valued and much-missed in-person experience.

Some of the students focus on the way the tools are designed to let them feel connected, including with students they might not have talked with in previous years due to physical classroom dynamics and different personalities. One student felt that she was able to feel 'connected and engaged with a range of different students'; another felt the platforms have 'brought us closer together [and] allowed us to speak with and form relationships with other students we may not have interacted with previously'. This feeling of being connected, according to some of the students, is very important in keeping them inspired throughout the

lockdown. One student wrote that ‘when I feel a part of a team and connected to my peers, I definitely work harder and am more motivated to make sure everything works well’; another student who is usually reserved and shy in physical classrooms wrote:

That is an experience I hadn’t really had the pleasure of having for most of my schooling, so it was nice to be encouraged to explore journalism with the incorporation of issues and topics that meant a lot to me.

While the Newsroom OCS were welcomed overall, a small number of students had reservations. At the far end, one student had a very negative experience, saying they ‘found the journalism cohort to be extremely cliquy, competitive, uninviting and pack-like’ and that there was a ‘bullying culture’ online that dissuaded them from using the Newsroom OCS. Several others qualified their support, saying that while they felt the tools were used well, ‘we had little choice’ and ‘learning in person is obviously better’. Others, however, spoke of unexpected benefits.

[On campus] it can be hard not to gravitate to the people you already know well in group settings, and by entering breakout groups in Zoom, and different chats on Slack, we were able to talk to each other on a more personal level. Slack was a great place for people to share news with. Many of us shared resources for consuming news, our favourite podcasts, people to follow on twitter, and funny threads found all over the internet. [...]. Sometimes it can feel like social media is this big, all-consuming entity of judgement and addiction, but in 2020 it was a lifeline.

The message of adapting to the Newsroom OCS, not just out of necessity but as a function of industry readiness, also penetrated. There was near universal support for the tools, and every student surveyed, except for one, said that the Newsroom OCS tools have increased their professional competence and sense of employability. Since the survey was done a few months after they graduated, some of the students have also spoken about how their online learning experience has contributed to their confidence working as professional journalists. One of them, who works as a social media producer for a media organisation, wrote that because of her

experience with using Slack, she was tasked to help lead her newsroom to integrate their communication tools.

Other students commented that they felt the most important skills they learnt were not attached to particular tools, but to an approach to learning.

The world has changed. Being able to feel just as engaged/motivated by remote collaboration, remote interviewing, remote production is a set of soft skills I learnt in 2020. ... I am more adaptable and better equipped to face challenges in my work as a journalist now. I also have a better understanding of some of the technological resources out there and I think these have elevated my skills as a journalist and made me a more desirable candidate for potential jobs.

Online Socialities and Technological Encouragement

Journalism is an industry that journalism students want to be a part of because they have a sense of fitness between journalism as a career choice and their individual preferences of the kind of lives they want to live. There have been varying studies done on the motivation of students for studying journalism, but the biggest so far in Australia shows that the top three motivations are 'varied career', 'creativity' and 'public service' (Hanusch et al., 2016, p. 108). As Jarvis and Watts (2012, p. 361) have identified with non-journalism students, the motivation for learning is found through involvement in the processes of 'living a worthwhile life', and this is clear in not only the way the journalism students do their work but also in how they connect with each other and mobilise their social resources.

The 'Communities of Practice' (CoP) framework as clarified by Wenger in his 1998 book *Communities of Practice: Learning, Meaning and Identity* is used to describe groups of people who share three structural qualities: mutual engagement, joint enterprise and shared repertoire (Wenger, 1998, pp. 73–85), and it might be useful here in analysing many of the students' comments on the survey. For example, the following comment has all three qualities:

[T]he remote learning experience allowed us to feel as if we are a part of a team working towards something. I think we would feel lost entering into our careers without this kind of experience.

However, in our observance of the way students connect with each other online as well as offline, it might be useful to follow the warnings of scholars who have criticised the limitations of CoP (see, e.g., Tummons, 2018) for being too generic. In a wider scholarly discussion, there are also those who have criticised the word ‘community’ itself, such as anthropologist Amit who argues that the word always requires ‘sceptical investigation rather than providing a ready-made social unit upon which to hang analysis’ (Amit, 2002, p. 14).

Drawing on Bourdieu’s field theory, other anthropologists have started using the concept of field sociality (Postill, 2008; Amit & Rapport, 2002; Jean-Klein, 2003) which focuses on the inherently plural and context-dependent nature of human connections and interactions. Instead of throwing away the CoP framework, however, we are proposing to graft the concept of sociality into it. Instead of conflating the complexities of the ways in which students interact with each other into a quality of ‘joint enterprise’, for example, we argue that it is more useful to use the quality as a starting point to analyse the various types of interaction, modes of discourse that are articulated around this quality. For example, we have now realised that there was a Facebook group that students use to communicate with each other. One of the students said that it was through this ‘unofficial’ Facebook group that he was feeling a sense of connection with other students.

I felt extremely connected to a community in my course. This didn’t entirely derive from the course work or the daily appointment/classes ... but more from the existing social networks established prior to the pandemic. Messages would be exchanged between the 40-odd students on external messaging tools at the same time we’d sit quietly in classes as our lecturers attempted to engage with us through the university’s platforms of choice.

This brings us to the fact that a classroom has sets of dynamics, rules of engagements and articulations of sociality and information that we as lecturers are not fully in control of. There is a space of 'official' sociality on Slack, Google Drive and Trello that is governed and managed through a collaboration between students and lecturers, but there is also a space of 'unofficial sociality' governed and managed by students. The problem with this is that the experience of students is defined by the various socialities and spaces they are a part of, and for some of the students, the fact that they were not a part of these online spaces in their first year could have impact on how students feel for the rest of their degrees.

The digital spaces we create and manage to run our courses are cultural environments which do not inspire all different types of interaction. This is why we agree with Revers that the key for making a digital space friendly and sociable is by emphasising on encouragement, or the 'rendering as desirable' rather than mere affordance or 'making possible' when we conceptualise and use the tools with the students (Revers, 2016, p. 231). From the following comments, it is clear that students appreciated the clear boundaries of using specific tools for specific reasons, such as this student:

They were used and maintained superbly, absolute props and thanks to Tito and Janak for that. Slack was great so long as we paid attention and people pinned important messages, Trello was great for mapping everyone's work that few other platforms could even try doing.

Importance of Teaching Staff

A further insight from the surveys is the importance of teaching staff, the learning culture they create and the skills they model. The importance of teaching staff is well established, as Richardson notes in the 2011 Australasian Survey of Student Engagement, the largest of its kind ever undertaken, and a key insight was that 'students who feel supported by teaching staff, and who find them available, helpful and sympathetic, are more engaged with their higher education studies than those who do not' (Richardson, 2011, p. 2). While she notes this conclusion may be

‘obvious’, she argues for the need to ‘reinforce the vital importance of sustained, significant and meaningful contact between staff and students if the quality of learning and teaching in Australian higher education is to be optimised’ (Richardson, 2011, p. 2).

Our survey results attest to this importance, and, additionally, underscore the value of the Newsroom OCS in facilitating student-staff contact. In Newsroom Practice, as educators we strive to be across the latest OCS and production tools, while at the same also creating an inclusive learning environment with a flat hierarchy. We aim to work alongside our student cohort as editors and mentors, but do not pretend to ‘know everything’, and we aim to learn and share almost as much as we try to teach. We also make ourselves as available as possible to those that need support with work or with other aspects of their lives. There’s nothing especially radical in this, but it’s clear from the surveys that students greatly appreciated the attentive and responsive teaching style.

I couldn’t see my peers and teachers face to face—but thanks to the amazing work that Tito and Janak put in to adapt our course for the online/remote world, I felt I was able to finish my degree with a bang and made some work I was very proud with by the end.

The more important things we learned I think are identifying good, interesting stories (especially in that pandemic breakout live news coverage class we did); then collaborating with Tito/Janak to work on the best way to bring them to life.

A minority of students flagged, however, that they found the Newsroom OCS trio ‘confusing at first’ and stressed ‘it can be tough staying on top of messages all the time’, and ‘there was an overreliance on students to be able to synthesise hundreds of messages on Slack to pull apart actual important points/course work’. There are useful cautions in this, and the survey suggests teaching staff should be attentive to how information is distributed in the OCS. But the overarching consensus was that the staff being highly responsive and attentive to both the student’s pedagogical needs as well as their overall well-being, paid off. The findings confirm Richardson’s conclusions from the 2011 Australasian Survey of Student Engagement that it is ‘essential that students are given the opportunity to

have sustained and meaningful contact with teaching staff ... it enables teaching staff to better understand the experience of students and their educational needs, and to respond to them'. Effective use of the Newsroom OCS, coupled with fostering a sense of student ownership and emphasising an industry-focused adoption of the OCS, can demonstrably further these goals.

Long-term Impacts

Throughout this chapter, we have shared some of our findings and approaches that we used to successfully redesign production-heavy subjects into online subjects in a matter of days due to hard lockdown caused by COVID-19 cases in the city of Melbourne, Australia, by digging deep into our professional experience and, while doing so, trying to find the balance between 'following' what journalism industry wants right now and 'innovating' to prepare students to shape journalism of the future.

We have now learnt a lot from what we did and did not do. From the beginning, we knew that it was going to be important to allow students the feeling of ownership over the digital space that we created for their online learning experience and that it was important to not water down the challenge and the quality of student learning in the online space. In other words, the approach to authentic real-world learning, where we model online learning from remote newsroom operations, has given students the opportunity to challenge themselves and feel confident that they have the skills to enter the journalism industry.

With our discussion on socialities and Communities of Practice, we have been made aware of the various sets of tools, dynamism and rules of engagements that students have in both online and offline spaces throughout their learning, and that it is important for us educators to embrace the messiness while also giving clarity to students.

As we move towards more possible disruptions in the future, either due to outside pressures such as a pandemic or from universities moving towards online teaching, we think journalistic practices, sense of mission, adaptability and collaborative natures of the journalism industry could be utilised to help academics involved in online teaching to be able to act effectively in a disrupted educational environment.

References

- Amit, V. (2002). *Realizing community: Concepts, social relationships and sentiments*. Psychology Press.
- Amit, V., & Rapport, N. (2002). *The trouble with community: Anthropological reflections on movement, identity and collectivity*. Pluto Press.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.
- Bunce, M., Wright, K., & Scott, M. (2018). 'Our newsroom in the cloud': Slack, virtual newsrooms and journalistic practice. *New Media & Society*, 20(9), 3381–3399. <https://doi.org/10.1177/1461444817748955>
- Deuze, M. (2006). Global journalism education. *Journalism Studies*, 7(1), 19–34. <https://doi.org/10.1080/14616700500450293>
- Fontinha, E., & Gannon-Leary, P. (2008). *Communities of practice and virtual learning communities: Benefits, barriers and success factors*. MPRA Paper 8708, University Library of Munich, Germany.
- Hanusch, F., Clifford, K., Davies, K., et al. (2016). For the lifestyle and a love of creativity: Australian students' motivations for studying journalism. *Media International Australia*, 160(1), 101–113. <https://doi.org/10.1177/1329878x16638894>
- Jarvis, P., & Watts, M. (2012). *The Routledge international handbook of learning*. Routledge.
- Jean-Klein, I. (2003). Into committees, out of the house?: Familiar forms in the organization of Palestinian committee activism during the first intifada. *American Ethnologist*, 30(4), 556–577.
- Morley, D. A., & Jamil, M. G. (2020). *Applied pedagogies for higher education: Real world learning and innovation across the curriculum* (1st ed., 2021 ed.). Palgrave Macmillan.
- Orlikowski, W. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404–428.
- Postill, J. (2008). Localizing the internet beyond communities and networks. *New Media and Society*, 10(3), 413–431.
- Revers, M. (2016). Digital media and the diversification of professionalism: A US–German comparison of journalism cultures. In J. Alexander, E. Breese, & M. Luengo (Eds.), *The crisis of journalism reconsidered: Democratic culture*,

- professional codes, digital future* (pp. 228–246). Cambridge University Press. <https://doi.org/10.1017/CBO9781316050774.014>
- Richardson, S. (2011). Uniting teachers and learners: Critical insights into the importance of staff-student interactions in Australian university education. AUSSE Research Briefing v.12 September 2011.
- RMIT. (2021). Why Study Communication at RMIT? Accessed 30 August 2022, <https://www.rmit.edu.au/study-with-us/communication>
- Rotman, D., & Preece, J. (2010). The ‘WeTube’ in YouTube—Creating an online community through video sharing. *International Journal of Web Based Communities*, 6(3), 317–333.
- Tummons, J. (2018). *Learning Architectures in Higher Education: Beyond Communities of Practice*. London, New York: Bloomsbury Academic.
- Thomas, L., Kane, P., Crosby, A., & Peterson, F. (2021). Digital collaboration in design education: How online collaborative software changes the practices and places of learning. *Pedagogy, Culture & Society*, 29(2), 231–245. <https://doi.org/10.1080/14681366.2020.1714700>
- Walton, G. M., Cohen, G. L., Cwir, D., & Spencer, S. J. (2011). Mere belonging: The power of social connections. *Journal of Personality and Social Psychology*, 102(3), 513–532.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge University Press.
- Wilson, R., Murray, G., & Clarke, B. (2018). The RMIT belonging strategy: Fostering student engagement in higher education. In D. Wache & D. Houston (Eds.), *Research and development in higher education: (Re) valuing higher education*, vol. 41 (pp. 257–266). Adelaide, Australia, 2–5 July 2018.



17

Chinese Undergraduates' Perspectives of an Emergency Shift to Online English Instruction during COVID-19 Pandemic in Wuhan

Xiaofei Tang and Yingliang Liu

Introduction

Over the past decade, the rapid development of technology and the pursuit of learning flexibility and broader access to educational resources have facilitated the integration of online instruction into higher education. In 2015, The National Foreign Languages Teaching Advisory Board (NFLTAB) launched the Guidelines on College English Teaching in China, noting that computer and information technology should be widely applied to college English education as they not only facilitate the reform of teaching approaches and practices but also provide a large range of innovative learning resources to students. While the emergence of massive open online courses (UMOOCS) has significantly influenced higher education on the merits of being accessible, affordable,

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sustainable, flexible, and collaborative, traditional face-to-face instruction has still taken precedence over online learning due to social, cultural, and Confucian-heritage factors in China (Cheng et al., 2017; McConnell, 2018).

However, the unexpected outbreak of the COVID-19 pandemic forced Chinese universities to consider a shift from in-class face-to-face teaching to online instruction as an emergency academic response. To minimise the impact on education continuity, the Ministry of Education (MOE) announced the Guidance on the Organisation and Management of Online Teaching and Learning in Regular Higher Education Institutions on 4 February 2020. This policy document required higher education institutions to utilise 22 recommended online platforms in China which could provide 24,000 tertiary-level courses for free to advance distance learning. Over half of China's higher education institutions resumed the spring semester online, resorting to existing online courses and live-streamed classes. This raises questions about whether the emergency remote instruction is perceived as satisfactory by students. This study therefore aims to examine Chinese undergraduates' learning experience with Emergency Remote Teaching (ERT) during the COVID-19 pandemic, providing a case study in Wuhan that suggests feasible instructional strategies and technologies for international academics in similar circumstances to consider.

Emergency Remote Teaching (ERT)

Compared to online learning, which is initially planned and designed to be virtual, ERT is considered a temporary shift of instructional delivery to a distance delivery mode, including online delivery, due to unprecedented crises such as the COVID-19 pandemic (Hodges et al., 2020). ERT makes full use of available remote instructional tools for delivering curriculum or teaching materials that would normally be conveyed face-to-face or as blended or hybrid courses (Mohammed et al., 2020). As ERT focuses on providing temporary access to educational resources and teaching supports in a prompt and reliable manner during a catastrophe, it is more efficient than rebuilding a robust educational ecosystem.

ERT has been implemented through several models by some countries in response to school and university shutdowns in a time of crisis. For example, a range of such audiovisual tools as radio stations and DVDs has been employed by Afghanistan's government to combat illiteracy and bring access to education within remote and mountainous regions where millions suffer educational disruption due to the ongoing wars between the government and the Taliban (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2011). Similarly, in 2009, a range of web-based tools including e-mail, Skype, and online courses was adopted by such American higher education institutions as the University of South Florida and the Virginia Community College as an emergency response to the outbreak of the H1N1 flu (Meyer & Wilson, 2011).

Given the significance of ERT in providing continuous education during a disaster or catastrophe circumstances, educational institutions and practitioners will certainly want to evaluate the success of their ERT efforts. One important aspect to consider in such an evaluation is the target users' experiences. However, the empirical studies on teachers' and students' experiences of Emergency Remote Teaching models are limited in number and scope. A recent case study on the application of ERT in Chinese primary and secondary schools during the COVID-19 pandemic reported in Zhang (2020) solely investigated teachers' and parents' perspectives of ERT implementation. Therefore, the current study attempts to depict what the ERT model looks like from students' perspectives.

Case Context

This case study focuses on a compulsory English course for English-major undergraduates—English Writing A2—in the spring semester of 2020 at the Wuhan University of Technology (WUT). Located at Wuhan, Hubei, WUT is home to over 55,700 domestic and international students and offers undergraduate and postgraduate programmes from liberal arts to sciences. The university has remained the largest-scale university under the direct administration of MOE for nurturing professionals and scholars oriented in three industrial sectors in China, including the building materials, transportation, and automobile industries.

The selected course English Writing A2 aims to develop Chinese students' basic English writing skills, including writing effective paragraphs, stating and supporting theses, and revising and editing their essays through practising argumentative writing. Since September 2015, English Writing A2 had adopted a blended-learning model, which consisted of an online course and a face-to-face classroom instruction. Students were required to complete self-paced online learning via the UMOOC platform before class, including watching lecture videos and reading passages. During the face-to-face sessions, the teachers facilitated collaborative learning by leading students in a variety of in-class tasks and activities.

The Delivery of ERT in English Writing A2

The process of shifting from blended teaching to Emergency Remote Teaching in English Writing A2 was accomplished through three phases which proceeded simultaneously. The first phase is the delivery-mode switch; all the teaching materials and instructional activities are accessible and readily available through integration of three web-based platforms, namely, UMOOC, Tencent QQ, and Tencent Meeting. The additional use of DingTalk allows students to submit their essays for review. The second phase is course materials adaptation; in addition to original learning resources, recent articles adapted from world-renowned English newspapers are introduced as reading passages depicting a range of COVID-19-related topics, such as infection prevention and control, people's attitudes towards the pandemic, and economic consequences. They are also adopted as prompts for students' argumentative writing. The third phase is the transformation of face-to-face instruction, where the teaching procedure of a traditional classroom is presented virtually. There are four steps involved in this transformation. The first step is a warm-up debate; two groups of students post their viewpoints alternately via group chats on Tencent QQ based on a trending topic, for example, 'Do face masks protect against coronavirus?'. The second step is to illustrate the characteristics of argumentative writing. The students are required to read four passages through Tencent QQ, including a commentary article

selected from English newspapers, a piece of sample writing by a learner of English as a second language, and two academic journal articles. They then identify the thesis, argument, counterargument, and refutation of the counterargument from each passage. By means of video conferencing on Tencent Meeting, the teacher further discusses how to use different types of evidence such as facts, statistics, examples, and expert opinions to support the argument. The third step is to introduce topics for students' after-class 500-word argumentative writing via Tencent Meeting. The final step is a live-streaming peer-review and proofreading session on DingTalk. The students are encouraged to review and comment on their classmates' argumentative essays in terms of thesis statement, argument clarity, and evidence, following the marking criteria provided by the teacher.

Research Procedure

The two-credit course lasted 16 weeks from late February to late June 2020. Sixty-one undergraduates enrolled in this course consisting of three classes instructed by the same lecturer, who was affiliated with WUT Department of English. Each class ran once a week for 90 minutes. Fifty-nine students voluntarily participated in this investigation, six of whom were engaged in individual interviews. In all, 86.44% were female and 13.56% were male. Nearly all the participants were sophomores, while only one was a senior-year student. Almost all majored in English, with the exception of two students studying Software Engineering. Approximately 70% had prior experience in online courses, whilst around 30% reported no such experience. Less than two-fifths (38.98%) previously received relevant training in online learning, whereas 61.02% provided the opposite response.

A questionnaire survey and semi-structured interviews were employed to collect the data in this study. Both were approved by the WUT School of Foreign Languages Research Ethics Committee. At the end of the final session, all participants used their own smart devices to complete the online questionnaire anonymously via Wenjuanxing, an online crowdsourcing platform in mainland China which provides functions

equivalent to Amazon Mechanical Turk. The participants received electronic consent forms and instructions for the online survey in advance. The researchers and the course lecturer were not allowed to access any survey data until after final grades were submitted. This survey consisted of eight close-ended questions including demographic and multiple-choice questions and five-point Likert-type scales (see Adelson & McCoach, 2010). Three demographic questions asked general information such as gender, grade, and study major. Two multiple-choice questions examined students' previous experience of online learning. Three Likert scale questions, including 14 subscales, were used to explore students' perspectives on specific features of this course structure and their overall satisfaction. The Cronbach's alpha (see Cronbach, 1950) for the five-point Likert-type scales was 0.952, which is an acceptable value for reliability. All items were presented in Chinese to avoid potential misunderstanding.

Furthermore, the researchers carried out semi-structured interviews of six students with varying levels of academic performance to gather qualitative data in relation to their views on ERT-based learning. Individual interviews ranged in length with an average of about 20 minutes, and they were audio-recorded and transcribed with the informants' permission. The interview outline involved the following questions: (a) How do you feel about such a full online delivery of English Writing A2? (b) How do you feel about the learning methods (self-study, pair work, and group work) of this course? (c) Do you prefer that this teaching structure remain as a regular instructional mode after the COVID-19 pandemic? (d) Do you have any other suggestions to improve online teaching?

The quantitative data from the questionnaire were analysed through SPSSAU v16.0 software. In addition, the researchers checked through the participants' responses to the interview questions and marked the keywords concerning their likes, dislikes, and suggestions to identify specific topics. Similar patterns within the topics were then generalised according to the overall features of this course. To minimise subjectivity, two of the researchers' experienced colleagues reviewed and critiqued the entire data analysis process.

Results and Discussion

Students' Perspectives of the Overall Learning Experience

Figure 17.1 reveals that more than 96% of the students had a good or very good overall learning experience of this Emergency Remote Teaching-based course, while only two respondents held a neutral position. No negative feedback was reported in this survey item.

The responses from individual interviews demonstrated that the students' learning experience was generally positive, particularly in terms of the course content and instructional modes, as exemplified in Student E's feedback:

In general, I think the course is very useful. It does not only focus on writing skills, but also introduces different genres, elements of essays, and structure. The course also uses different modes of instruction, including recorded lectures and live meeting. The live meeting allows interaction and

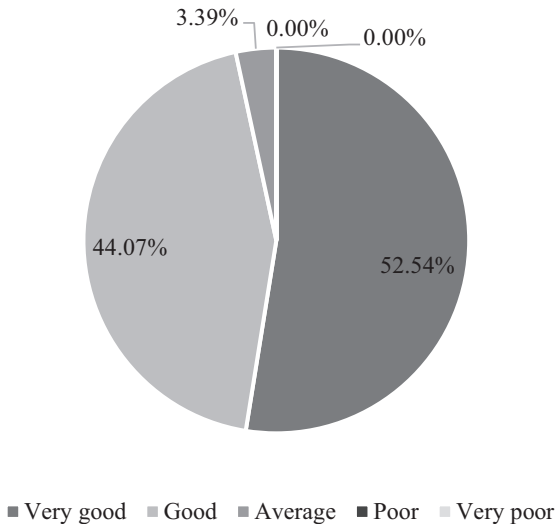


Fig. 17.1 Students' self-report of their overall learning experience

enables the teacher to address the questions on the recorded lectures. (Student E)

Nevertheless, the interviewees addressed two major concerns. Firstly, the interaction between students seemed less effective, since simultaneous communication might be disrupted in the virtual classroom. Secondly, those students with a limited English proficiency might feel ‘left behind’, as this course structure brought more challenges to students’ autonomous learning. For instance, Student B mentioned: ‘Students discuss in their own QQ group. Some students can type very fast, some are slow typers, while others prefer to send voice messages. The online communication is not very convenient for us to express our opinions.’ Student F also said: ‘Due to my limited proficiency, I sometimes had trouble following the class. I sometimes strayed away from the class and could not follow the teacher when I tried to put my attention back.’

Students’ Perspectives of Specific Features of the Course

Table 17.1 shows the results regarding the students’ perceptions towards the integration of four web-based platforms, including UMOOC,

Table 17.1 Students’ feedback on the implementation of technology tools

Item	Very good (%)	Good (%)	Average (%)	Poor (%)	Very poor (%)	M
Ease of assignment submission	57.63	37.29	5.08	0	0	4.53
Teacher-student instant communication	54.24	30.51	13.56	1.69	0	4.37
Fluidity of instructional videos and audio	45.76	40.68	13.56	0	0	4.32
Accessibility of tools and functions	49.15	35.59	15.25	0	0	4.34
Internet connection and speed	37.29	28.81	32.2	1.69	0	4.02
Stability of platforms	38.98	37.29	20.34	1.69	1.69	4.1

Tencent QQ, Tencent Meeting, and DingTalk, through six survey items. The respondents reached the highest agreement on the item 'ease of assignment submission' ($M = 4.53$), with nearly 95% indicating a positive attitude. This was followed by 'instant communication' ($M = 4.37$), 'accessibility' ($M = 4.34$), 'quality of videos and audio' ($M = 4.32$), and 'stability' ($M = 4.1$). The item 'internet connection' had the lowest agreement ($M = 4.02$), with slightly over 66% considering it good or very good while 3.38% demonstrating a negative position.

Importantly, the informants in individual interviews pointed out that varied accessibility to broadband internet and instability of web-based platforms had occasionally compromised the quality of their online learning, as stated by Students A and C. 'We were sometimes asked to view the teaching videos in class and ask questions. It can be time pressing. My viewing can be sometimes interrupted by unstable network. It's frustrating', said Student A, while Student C stated: 'It takes time to switch platforms. And sometimes the platforms are not very stable. Last time I tried to speak on Tencent Meeting, but it just collapsed!'

Similarly, a number of established surveys found that such technical obstacles greatly hampered online education. For example, the results of a 2020 poll conducted by the Office for Students (OfS) of the Department for Education in England regarding 1416 students' experience of digital learning during COVID-19 showed that 52% reported a major impact on their learning from a slow or unreliable internet connection (OfS, 2020). A recent large-scale observation of 2681 faculty and 25,091 students in Tsinghua University revealed that platforms' stability was considered one of the biggest challenges during the university's online education under COVID-19 (Wang, 2020).

In addition, most students responding to the survey possessed a considerably positive attitude towards the online teaching materials provided in this course (see Table 17.2). The participants came to the highest agreement on the item 'relevance of the teaching content to what is required in English-major courses for your grade' ($M = 4.66$), with 98.31% praising it. This was followed by 'overall quality' ($M = 4.61$), 'diversity' ($M = 4.56$), and 'course assessment' ($M = 4.54$). Both the items 'relevance to your personal interest' and 'student engagement' had the

Table 17.2 Students' feedback on the online teaching materials

Item	Very good (%)	Good (%)	Average (%)	Poor (%)	Very poor (%)	M
Relevance of the teaching content to what is required in English-major courses for your grade	67.8	30.51	1.69	0	0	4.66
Relevance of the teaching content to your personal interest	54.24	42.37	3.39	0	0	4.51
Overall quality of the online teaching materials	64.41	32.2	3.39	0	0	4.61
Diversity of the online teaching materials	59.32	37.29	3.39	0	0	4.56
Student engagement	54.24	42.37	3.39	0	0	4.51
Course assessment materials	59.32	35.59	5.08	0	0	4.54
Intellectual challenges for you (levels of difficulty)	50.85	44.07	5.08	0	0	4.46

same level of agreement ($M = 4.51$). The students reached the lowest agreement on the item 'levels of difficulty' ($M = 4.46$).

This finding was consistent in part with comments by most informants in the individual interviews. Four of six informants (Students A, B, E, and F) mentioned that the content of the online teaching materials was closely associated with the requirements for second-year English majors as stipulated in the Test for English Majors (TEM):

I really enjoy the part when the teacher explicitly taught us how to write an essay based on the sample text in the textbook. Also, we practised TEM-4 essays every two weeks, which is very helpful. The in-class writing practice and materials really pushed me to work hard on this essay. It is helpful for me to prepare for the exam. (Student B)

TEM was launched in 1991 by NFLTAB under MOE. It covers two levels of national tests: TEM-4 and TEM-8. Only second-year or above English majors are entitled to take TEM-4, which covers six sections including dictation, listening comprehension, cloze reading, grammar and vocabulary, reading comprehension, and composition. Although

TEM is non-mandatory according to MOE, many colleges require English-major students to take the test, which is adopted as an index to assess their proficiencies in English as well as the effectiveness of English language teaching in these institutions (Heng & Dong, 2015). Thus, the online teaching materials of English Writing A2 which concentrate on argumentative writing and related reading comprehension appear to fit the needs of English-major sophomores who seek to pass the de facto compulsory TEM-4. The reason the students in this survey complimented the item, 'relevance to what is required in English-major courses for your grade', the most could be attributed to their learning motivation. That is, rather than intrinsic or instrumental motivation, the motivation of English learners in China could be understood as 'required'; namely, those students are 'studying English simply because it is mandatory' (Warden & Lin, 2000, p. 539).

Another interesting finding is that the feedback from individual interviews on the integration of the three learning methods throughout the course, including self-study, pair work, and group work, was somewhat mixed. All the interviewees highly recognised the importance of group and pair work in stimulating their experience of various types of interaction and helping to generate a more relaxing and cooperative classroom environment. However, the students' perspectives of self-study remained controversial due to their different degrees of self-discipline:

Self-study does not work very well for me, as I am not so self-disciplined. I could not concentrate on the teaching videos when I was watching them. I had to view the video several times so that I could get what the video was about. Self-study probably works better for others. (Student D)

This issue was also reported in a study of student and teacher perceptions of self-learning by Lunyk-Child et al. (2001), which found that some students experienced a painful transformative process starting with negative feelings. Students' distinct attitudes towards self-study could result from their variability in terms of self-learning competencies, real-world experiences, and familiarity with the subject matter (Du, 2013). Contrary to self-study, group and pair work allows students to work in a

conducting and facilitating environment, where they are more motivated to engage in further communication (Ellis, 1994).

Conclusion and Recommendations

This case study utilised mixed methods to investigate Chinese students' perspectives of their learning experience in an Emergency Remote Teaching -based course English Writing A2 at the WUT School of Foreign Languages in China. The findings have indicated that the implemented ERT structure received positive responses from most of the surveyed students in terms of their overall satisfaction and specific features of the course. Nevertheless, there are several factors that negatively affected some students' success with online learning, including real-time interaction between students, internet connectivity, platform stability, and individual differences in self-discipline and language proficiency.

Noting the limited scope of the small-scale research reported here, some possible implications for understanding and improving ERT practices in higher education sectors in China and other regions of the world can be proposed, with respect to technical infrastructure, platforms, and preparedness of universities and teachers.

Firstly, this study showed that unreliable internet connections constrained the students' engagement with course materials and in-class activities. Effective online learning necessarily relies on a well-resourced technical infrastructure which provides consistent and stable access to technologies and to the support and communication systems (McConnell, 2018). As such, it is an essential requirement for the switch from a physical classroom to ERT to set up a good internet connection at home. On a national level, the government needs to take action to improve network connectivity for households. A good example is that the Ministry of Industry and Information Technology of China issued a notice on 2 March 2020 urging domestic telecom companies to extend network coverage in rural areas and offer discounted internet plans to students from low-income families. On an individual level, the teacher should minimise the use of instructional videos during live-streaming classes so that those

students with restricted internet access will not be frustrated about poor video fluidity.

Secondly, data from both the questionnaire survey and the interviews revealed that the students' concerns about the stability of online platforms had been shaping their learning experience. Students who were not digitally prepared could struggle with an unexpected platform crash or repeated switches between multiple platforms. Therefore, it is necessary for teachers to consider more stable and reliable web-based platforms while implementing an Emergency Remote Teaching-based course. A large-scale statistical evaluation of user experience with seven mainstream platforms reported in Chen et al.'s (2020) study could offer insight into a feasible choice of online learning platforms for post-pandemic education. Their evaluation demonstrated that Zoom was perceived to perform the best in terms of system stability compared with six other platforms including Tencent Meeting, DingTalk, UMOOC, TIM, WeChat Work, and Chaoxing. This finding was also confirmed in another comprehensive comparative study of 364 students from 49 colleges across India which applied a loyalty index-net promoter score to evaluate how much seven major platforms (Zoom, Google Meet, Microsoft Teams, GoToWebinar, Zoho Meeting, Adobe Connect, and GoToMeeting) had been favoured by their target users (Thakker et al., 2020). Thus, it is sensible for teachers who regard platform stability as their teaching priority to integrate the use of Zoom into their ERT design. Moreover, higher education institutions should make more efforts to provide technical support for platform instability, such as recruiting sufficient technical assistants and volunteers to deal with technical issues of both faculty and students.

Thirdly, the results have raised concerns on the preparedness of universities and teachers for ERT-based courses. For universities, the management needs to take the reins on creating strategic plans for ERT to guide academic departments and faculty to achieve a smooth transition to online learning in a timely manner. The implementation of digital learning should be facilitated consistently within every academic discipline. For instance, as one of the leading universities in online education in China, WUT has been prepared digitally by offering about 478 online courses as of June 2020. As a fully functional example, UMOOC has

been in place for English Writing A2 since 2015; the educational continuity and teaching quality of this course could be well-sustained while confronting this crisis.

For teachers, online teaching materials for Emergency Remote Teaching need to be tailored to such student expectations and learning motivations as the provision of TEM-4 writing practice in English Writing A2, because students' learning effectiveness will be constrained by their weak persistence in online learning if they feel unrelated to random materials (Li et al., 2013). In addition, there are two teaching strategies that contribute to dealing with students' individual differences in self-discipline and language proficiency. Firstly, teachers or teaching assistants can offer individualised sessions to those students who feel they are 'left behind' in live-streaming classes due to their limited English proficiency. Secondly, teachers can adopt a range of validated instruments, such as the Self-Direct Learning Readiness Scale, to assess critical variables affecting students' self-learning success including the readiness, learning styles, and psychological types. In this way, teachers can adjust the teaching content and structure learning tasks in line with different learning styles before class. For instance, for those students who are less self-disciplined during self-study, teachers can encourage them to get more engaged with pair and group work.

References

- Adelson, J. L., & McCoach, B. D. (2010). Measuring the mathematical attitudes of elementary students: The effects of a 4-point or 5-point Likert-type scale. *Educational and Psychological Measurement, 70*(5), 796–807.
- Chen, T., Peng, L., Jing, B., Wu, C., Yang, J., & Cong, G. (2020). The impact of the COVID-19 pandemic on user experience with online education platforms in China. *Sustainability, 12*(18). <https://doi.org/10.3390/su12187329>
- Cheng, H. N. H., Liu, Z., Sun, J., Liu, S., & Yang, Z. (2017). Unfolding online learning behavioural patterns and their temporal changes of college students in SPOCs. *Interactive Learning Environments, 25*(2), 176–188.
- Cronbach, L. J. (1950). Further evidence on response sets and test design. *Educational and Psychological Measurement, 10*(1), 3–31.

- Du, F. (2013). Student perspectives of self-directed language learning: Implications for teaching and research. *International Journal for the Scholarship of Teaching and Learning*, 7(2), 1–16.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.
- Heng, H. J., & Dong, J. (2015). *Perspectives on teaching English at colleges and universities in China*. TESOL Press.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. *US: EDUCAUSE Review Report*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Li, Y., Wu, S., Yao, Q., & Zhu, Y. (2013). Research on college students' online learning behaviour. *e-Education Research*, 34(11), 59–65.
- Lunyk-Child, O. I., Crooks, D., Ellis, P. J., Ofofu, C., Mara, L. O., & Rideout, E. (2001). Self-directed learning: Faculty and student perceptions. *Journal of Nursing Education*, 40(3), 116–123.
- McConnell, D. (2018). E-learning in Chinese higher education: The view from inside. *Higher Education*, 75, 1031–1045.
- Meyer, K. A., & Wilson, J. L. (2011). The role of online learning in the emergency plans of flagship institutions. *Online Journal of Distance Learning Administration*, IV(1). https://www.westga.edu/~distance/ojdl/spring141/meyer_wilson141.html
- Mohammed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). Emergency remote teaching during coronavirus pandemic: The current trend and future directive at Middle East College Oman. *Innovative Infrastructure Solutions*, 5, 1–11.
- Thakker, S. V., Parab, J., & Kaisare, S. (2020). Systematic research of e-learning platforms for solving challenges faced by Indian engineering students. *Asian Association of Open Universities Journal*. <https://www.emerald.com/insight/content/doi/10.1108/AAOUJ-09-2020-0078/full/pdf?title=systematic-research-of-e-learning-platforms-for-solving-challenges-faced-by-indian-engineering-students>
- The Office for Students (OfS). (2020). *National student survey 2020: Analysis of the impact of the coronavirus pandemic*. <https://www.officeforstudents.org.uk/publications/nss-2020-analysis-of-impact-of-coronavirus/>
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2011). *Understanding education's role in fragility: Synthesis of four situational analyses of education and fragility: Afghanistan, Bosnia and Herzegovina, Cambodia, Liberia*. Paris: International Institute for Educational Planning.

- Wang, X. (2020). *Chinese higher education in response to COVID-19*. <https://iite.unesco.org/wp-content/uploads/2020/03/Tsinghua-University.pdf>
- Warden, C. A., & Lin, H. J. (2000). Existence of integrative motivation in an Asian EFL setting. *Foreign Language Annals*, 33(5), 535–545.
- Zhang, T. (2020). *Learning from the emergency remote teaching-learning in China when primary and secondary schools were disrupted by COVID-19 pandemic*. Research Square. <https://doi.org/10.21203/rs.3.rs-40889/v1>



18

An Action Learning-based Approach to Creating and Maintaining Student Engagement Online

Lynn Gribble and Janis Wardrop

Introduction

Action learning is the process of concurrent reflection on present experience as a source of knowledge to improve practice. Utilising iterative and often concurrent phases of action and reflection, it is taught to business and management students as a means of continuous personal, professional and organisational learning and improvement. The COVID-19 pandemic provided the opportunity to adopt this method to our own professional practice when moving a compulsory Master's level business ethics course to fully online delivery. The student cohort in this course is largely international, with limited professional work experience, and has often been educated in an objectivist system with teacher-led, well-defined activities that lead to passive and individual approaches to learning. In contrast, our course takes a constructivist approach whereby the student is asked to make knowledge and meaning based on their own

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past experiences as well as those of their peers in addition to the concepts taught. Thus, the course is a situation of ‘awakening’ the student to engage with the material, consider and explore what they would do, or have done, when faced with a similar situation and provide a lens to develop critical thinking.

The course was developed with two guiding principles in mind, ‘learning is not a spectator sport’ (Chickering & Gamson, 1987, p. 4) and exposure to ethical dilemmas allows students to explore the psychological and moral realms of ethical wrongdoing prior to making decisions (Arce & Gentile, 2015; DeTienne et al., 2021; Gentile, 2017). These principles inform much of the curriculum and the learning design. The students are participants and co-creators of knowledge, rather than empty vessels in which to pour knowledge. Therefore, learning is an activity performed by the learner, not by the ‘teacher’. As such we have utilised and developed activities that build an environment in which students want to participate, rather than act as merely the receivers of knowledge. When the COVID-19 pandemic arrived around the globe in 2021, the disruption to the ways in which we worked, socialised and learnt were almost universal. In a short space of time, the traditional structures and routines of higher education classes delivered in a specific room on campus at a set time each week were stripped away. Campuses were shut down, with academic work and student learning occurring from diverse, sometimes remote, locations. For all in this situation, the challenge was immense—how to provide students with opportunities to continue to learn that would meet or exceed their expectations of learning while meeting the course outcomes. Online learning is not a replica of what occurs in the classroom. It has constraints but also offers possibility to innovate and reimagine what a classroom and learning can look like and feel like. As the implications of the pandemic were starting to be felt, our challenge was how to move the course online, in real time, with little time to plan or pilot.

In this chapter rather than adopting a ‘panic-gogy’ approach (after Morris 2020) we suggest returning to the philosophical roots of course design and discipline-based tools to support change when it is least expected and immediately necessary. We explore how adopting action learning processes enabled us to continue to enculturate students into

constructivist learning environments (Alt, 2015; De Kock et al., 2004). Action learning supported both student engagement and teacher development while shifting a compulsory core course to online synchronous learning.

Designing Learning Experiences for Student Engagement

Designing experiences to engage students in their learning needs to consider both the context and cohort: putting students at the centre of the activity. Constructivist learning theory contends that learning is the process of building understanding and knowledge through both experience and reflection on those experiences and then reconciling this with prior understanding. It is a process of 'asking questions, exploring, engaging in dialogue with others and reassessing what we know. As such we are active creators and constructors of our own knowledge' (Harasim, 2017 p. 62). At an epistemological level, constructivists see knowledge being 'constructed' by learners through interaction with others and their environment: knowledge is not absolute and finite, it is dynamic and evolving. This epistemological view underpins an important consideration for teachers. It democratises learning, moving the focus from teacher-delivered content to one that is co-created by both students and teacher. Constructivist approaches require the student to take ownership of their learning while the teacher engages in facilitative practices to draw the student into problem-solving mode and encourages the student to be self-regulated (Banihashem et al., 2021). Constructivist approaches to learning are particularly strong in social science disciplines and complement the case study method of teaching that is a feature of many business school classrooms.

The case study method of teaching has been a feature of business education for 100 years. Originally championed by Harvard Business School, the approach promotes critical thinking, problem-solving and network thinking skills. Rather than providing 'the answer', case study teaching relies 'on ensuing discussion and knowledge-sharing among students for

the learning to unfold' (Harvard Business Publishers editors, 2021, p. 1). The case method is designed to encourage student participation, removing the teacher as being the imparter of knowledge to being a facilitator and quiet provocateur, probing and guiding to drive critical thinking and application in a set scenario. Through hearing each other and practicing their answers, students learn more than the concepts alone. They become the co-creators of knowledge and in doing so they build their self-efficacy (Alt, 2015). Exposure to past circumstances through case study teaching also provides students with insight and experience in a safe environment, introducing them to the potential issues they will face as business professionals upon graduation. For students with limited personal work experience, the use of case studies provides them with an experience base from which to create their own knowledge, confidence and skills. Hence, the use of case studies as a learning tool complements a constructivist approach to learning.

Learning from Challenging Contexts: Action Learning to Improve Understanding and Practice

Action learning is seen as a tool for solving problems. It recognises the irrationality can occur in an organisation and gives psychological ownership of the problem to people who must resolve it and live with the outcome. There are no risk-free ways to deal with uncertainty; however, action learning processes develop informed approaches to that risk that can also be creative, cost-effective and motivating while also undertaken expediently (Sanyal, 2018). Action learning features in many management programmes, training current and future managers and leaders to make more informed business and personal decisions based on evidence from their own experience (Gold & Pedler, 2022; Stephens & Margey, 2015; Volz-Peacock et al., 2016). Action learning is a process most commonly promoted for 'workplace learning' and involves an iterative process of concurrent action and reflection on said action (and outcome) that not only creates new understanding but also improves practice

(Raelin, 2009). The nature of action learning provides an iterative cycle of act, reflect, learn, plan (Zuber-Skerritt, 2002). It recognises the ‘actors’ as experts and gives them agency to act, learning in real time with little to no delay. Adopting action learning approaches requires no pilot programme and relies on both qualitative and quantitative data. Therefore, it can be particularly useful in times of disruption and upheaval when the need to change is driven by exogenous forces.

‘Practice what you preach’: Adopting Action Learning to Address the Challenges of the COVID-19 Pandemic

The speed at which government responses to the spread of the COVID-19 pandemic translated to a wholesale shift to online learning and meant that there was little time in which to consult the broader pedagogical and research literature on best practice. However, this did not mean that we had to forgo a scholarly approach to innovation and change. By considering the advice we would offer others, we seized the opportunity to do more than implement online learning, and took our ‘own advice’ and implemented an action learning approach (Zuber-Skerritt, 2002) to direct our response. Importantly, action learning aligns well to the constructivist approach to learning that underpins our pedagogical practice, as it too seeks to solve a problem (Banihashem et al., 2021). As a problem-solving approach, action learning enables the learner to remain constructivist at the same time. The immediacy of the need to act as the COVID pandemic hit left little time to develop sophisticated plans. It was a week by week proposition where actions taken could be informed but also needed to be reflected upon, changed and adjusted based upon data, feedback and other measures such as student engagement and responsiveness. Hence, we implemented the action learning cycle of act, reflect, learn and plan into our professional practice. In doing this, knowledge is obtained, built and embedded and creates a clear ‘launch’ point for the next cycle to commence. The adoption of the broad umbrella of action learning was appropriate as it enabled multiple cycles to be undertaken

concurrently, and adjustments to be enacted quickly. As teachers we needed to learn on the run, but as educators, we wanted to be able to understand our experiences as part of the educational change process the pandemic has initiated not just for our course but for our colleagues, the institution and beyond.

With ten weeks' delivery, eight to be completed fully online, we planned for four action learning cycles to support our response, providing flexibility to adjust and embed learning. As the term progressed, the course by its nature and natural rhythm confirmed four cycles would support the investigation of learning in context. These cycles commenced with exploring what technology we had and could use to re-create the classroom online while building and maintaining rapport. Cycle two focused on building skills as teachers and in students as learners using the technology. Cycle three built a learning environment where students could lead discussion. In cycle four we introduced new tools that extended engagement as well as consolidated what we had learnt in preparation and delivery of term 2 and beyond.

Cycle One: The Challenge of a Global Pandemic

Our teaching year started with face-to-face learning; however, watching the pandemic spread around the globe and observing the impact it was having on society, it was evident that we would soon be facing the challenges of disruption and lockdowns. Hence, our action learning project started even before lockdowns were enforced. The desire to maintain student engagement and course outcomes underpinned our approach to (re) design for online delivery. Not every student comes into a course on an equal footing. Technology literacy, international firewalls, internet bandwidth, culturally and linguistically diverse (CALD) students and varying levels of educational capital all had to be addressed. Despite having started the term teaching face to face, as the pandemic spread, students were called back to their homes, meaning that the consistency of a physical classroom was replaced by geographical and technological dispersal. While the university was quick to respond to the issues caused by international firewalls, bandwidth variability was a challenge for some

students. As a result, our plans needed to address technology accessibility and literacy; CALD needs and building educational self-efficacy as these were well within our sphere of control and could be reimaged for online learning, in ways that could accommodate international firewalls and bandwidth/access issues.

As we started out, it was important that the move to a fully online learning environment would allow us to retain the engagement, interaction and application that had previously occurred in our face-to-face classroom sessions. While having limited options to visually ‘connect’ with the student in the online classroom, we were also losing opportunities for ‘incidental’ interaction that naturally occur before and after a face-to-face class. With the loss of these visual cues and clues, along with a loss of impromptu voice interjections, it was important to look for ways to activate the student throughout the class. We wanted to continue to facilitate and support student learning as an active process of creation that could be ‘seen’ and measured while being acutely aware that online learners can be part of the attention deficit economy, whereby they are overwhelmed by a tsunami of distracting information (Bhatt, 2019). Therefore, keeping and maintaining student’s attention would be part of our teaching landscape.

Act(ion): To facilitate an active and engaged learning environment we made the deliberate choice of implementing a synchronous learning design to provide structure and support to keep our students on track and motivated as a cohort. Given the sudden isolation that was occurring worldwide as students returned home to study and/or were observing physical distancing and lockdown protocols, we were highly aware that interaction in class might be one of the few person-to-person interactions occurring each week with any certainty. The general rise of uncertainty globally and more specifically in relation to what learning would look like increased our need to keep track of the students, their progress and attendance while also supporting and guiding them to maintain their studies and commitment to learning in the face of such a sudden and dramatic change to their world. The forced move to online delivery meant that we could not assume that students had the knowledge or skills to learn successfully, having initially enrolled in a programme that was delivered in person. Thus, teaching synchronously conveyed to the students that we

were there with them, available, supporting them, and they were not alone or isolated. The pandemic had forced many expectations upon these students to be self-sufficient and cope often on their own or in isolation. By adopting a synchronous teaching model, we envisaged making the class a safe, consistent and nurturing space.

Reflect: Observational data and informal feedback immediately told us the students valued synchronous classes. The student attendance numbers reflected close to the full enrolment numbers at $\sim >95\%$. Students were making comments in the chat boxes and some were even turning on their microphones to contribute; they were not sitting in silence, and hence we could broadly conclude our plan was working, but we wanted more. We wanted every student to attend and engage with us and with each other as they would have done in the past.

Learn(ing): We were learning that students were attending the online class, but technology use was inequal and often challenging for the student. Our learning became clear: we needed to harness technology as an enabler for our teaching practice not as the driver.

Plan: Cycle one showed us we had the fundamentals right. Now we needed to find new ways to build rapport and community within the class to maintain a dialogical approach to learning (Calcagni & Lago, 2018). Our plan was to use routines and tools to create certainty and structure to the online class at a time when external uncertainty was high.

Cycle Two: Keeping the Pedagogical Horse before the Technological Cart (after Sankey, 2019)

In cycle two our focus was on enhancing student participation and build skills needed to study online.

Act(ion): The first action in cycle two was to re-create classroom. We developed a series of rituals and symbols to signal that we had 'entered the classroom'. When walking into a physical classroom there are people, activity and noise. To signal to students that they had entered our 'online' classroom we 'opened' the class early and played music while waiting for the clock to tick over. The music was upbeat and relevant and it appeared to lift everyone's spirits and enabled students to check their device audio

settings. We encouraged everyone present to post a welcome in the chat function, facilitating this by contributing our own observations about the weather or what our week had been like. As the class ended, we again played music to signal the transition out of our classroom; it also acknowledged the end to our now digitally mediated interaction.

Using technology as an enabler or the glue to deliver the course, we quickly used the built-in poll feature to replace the in-person 'hands up'-style interactions of a face-to-face class, and when used frequently they provided instant feedback on learning. We expanded our repertoire of questions, from ones focused on content to include questions that would give feedback on student understanding and engagement by inviting students to respond to questions to indicate their level of understanding, with response options such as 'I'm confident', 'I think so' and 'I'm lost'. These polls told us quickly if the information being discussed had been digested and understood (Gribble & Wardrop, 2021). This formed a 'self assessment' for the students.

Commencing discussions saw the chat box employed initially as a means to provide short answers to teacher posed questions. It provided students with another mode to engage and 'speak up'. Within the space of two weeks, students were actively posting comments and discussion points, which we could then incorporate into the class, giving the students voice as done previously when collating answers on a board or paraphrasing an answer back to the class.

Reflect: Our own experience as well as student feedback told us that those initial technical issues and doubts had been resolved, and the cohort was now 'ready to learn' again. Students were attentive and engaging with us, but more effort was needed facilitate a truly constructivist online learning environment.

Learn(ing): Our reflection needed to be based upon the evidence at hand as to the effectiveness, and our qualitative data were supported by some solid numbers. By measuring how many of the students attended, interacted with the polls, commented on the music and posted in the chat, we could use this information to underpin our reflection. The numbers provided reassurance that our plan and actions were on the right track and that our students were engaged and comfortable with the learning environment we had created.

Plan: As the pandemic was now clearly going to be longer term, we need to consider how to develop our students as future online learners in the next cycle. Now that we (and the students) had ‘mastered’ the use of the polls and the chat functionality, our next challenge was to expand their knowledge of online learning so that they had agency and self-regulated learning capability. The plan was to focus on driving interaction as a form of engagement (Anderson, 2003).

Cycle Three: Growing Together

Face-to-face classroom norms are easily observable and students quickly understand what is expected in terms of behaviour and attitude. Without the fidgets and faces to guide everyone our next action had to clearly signal the expected learning behaviour for this online classroom.

Act(ion): In cycle three our actions were aimed at building ‘learning together’ mode. We were determined to replicate the lively, collaborative and discursive classroom experience that our students would have experienced before the pandemic. In the previous cycle we had modelled and encouraged students to engage in participatory dialogue. For cycle three we wanted students to lead the discussions. Our actions had shown them how to talk up in class individually. In this cycle we not only wanted them to provide insights and experiences as they might in class, but to interject and interact with each other, asking questions and providing answers to us and other students. As student confidence grew and familiarity with the tools developed, the chat functionality was now multidirectional with students talking to each other as well as to the class as a whole. The student contributions show that the more engaged and capable students had become active in supporting other students, engaging in peer support activities and seeking additional acknowledgement and recognition. We also become more responsive with polls being created in real time (rather than being pre-scripted) to capture trending themes or questions asked in the chat feed. To maintain engagement and attention these polls were used at least every 30 minutes, sometimes as frequently as every 10 minutes.

We were conscious that online interactions can lack a ‘human’ touch and that as the pandemic rolled on everyone was feeling the effects of social isolation and dislocation, we had to share some of who we were beyond the screen. Without much planning, and working from home, our furry companions (our ‘at home teaching assistants’) were introduced and welcomed readily by the students.

Reflect(ion): Our reflection, both in and of action, revealed that we had found ways for the students to relax and show us who they were beyond the screen as well. We had found ways to build relationships and rapport with students that addressed the traditional assumptions of power distance in the teacher/student relationship. The introduction of our teaching assistants saw student engagement grow further—students wanted to say hi to the cat and the dog and would then extend their welcome to others in the class as well. We had started to develop our identity as learning partners rather than as teachers, as people at home with pets, sharing in a unique experience and learning together online. It was the furry teaching assistants’ presence that emboldened students to start opening up beyond course questions. Knowing how our students felt emotionally enabled us to pace and adjust information and class activities to students’ needs. We learned that despite our attempts to be approachable and build rapport, the teaching assistants were even more approachable, engaging and encouraging for our students.

Learn(ing): We observed that as confidence and rapport grew, so too did the psychological safety of the group (Sedlovskaya, 2020), which meant our next cycle could explore new media that would enable us to check on student understanding and learning more deeply. Our self-reflection provided insights about our concerns of attention as well. We observed that using multiple tools at once meant that the students were busy multitasking within the course instead of in addition to the course, and were remaining actively engaged with classroom activities. Our conclusion was to ensure that there were multiple activities and opportunities to be heard, to be seen and to remain active.

Plan: Our plan and actions in this cycle supported student engagement in their learning. It had become obvious that the use of online polls worked well to capture immediate and simple responses. But we were missing out on the learning opportunities presented if students had the option to

provide longer answers. For us, the ability to capture these more considered responses would allow us to mine and analyse the responses outside of the classroom, as we planned future classes. This meant we needed to look for technology solutions beyond the current Learning Management System and delivery platform of Blackboard Collaborate.

Cycle Four: Mastering the Learning Space

Cycle four commenced as we entered the final weeks of the term. Given the successes of the previous cycles we continued to enhance our learning environment as well as start to plan for course delivery in the future.

Act(ion): Our previous experiences of using responseware in face-to-face teaching proved advantageous and we incorporated the use of *Socrative* responseware to gather longer answers and engage in pop-style quizzes. *Socrative* allowed us to store the data to mine for insights about student learning after class and enabled real-time visual displays of student responses (poll results, word clouds, etc.) that kept students engaged, while enabling us to adjust pacing of the class and delivery based on real-time student-driven needs.

Reflect(ion): As the term drew to a close, we reflected on our successes in this term. Student feedback by way of end-of-term course evaluation process proved insightful to inform our reflections. The students told us clearly how they enjoyed interacting: 'interactive activities such as polls during the class to keep a track of everyone picking up the concepts. Socratives [sic] were also very good.' The numbers also told us we had been successful with this course rating 0.24 higher than the university average (on a scale of 6), and we had been more successful than other courses with a 0.52 higher score than the university average for the measure 'I developed my ability to work effectively online'.

Learn(ing): We had successfully supported our students to achieve their anticipated learning experiences and supported them through what would hopefully be a once in a lifetime event. Synchronous learning had been valued more than was first anticipated. Moving learning online had not become distant or depersonalised; instead, by using tools 'hidden in plain sight' within the technology at hand, we had created connection

and a classroom experience where students were seen, heard and supported to transform not through the learning content alone but in how they learned as well. While many of the student's frustrations and concerns were based on things outside of our control such as technology, we could use our knowledge to design learning systems that reduced confusion, supported self-regulated actions and in doing so opened cognitive space for real learning and connection to thrive.

Plan: While we had succeeded this term, there were future cohorts of students to consider. The pandemic continued, and what originally had been thought of as a possible short-term need to move online, was increasingly evident would need to continue to deliver for the foreseeable future. While we had tested and proven the strong pedagogical foundations for the course, each successive term would see us return to our action learning cycle as we onboarded new cohorts of students, evaluated their ability with the technology and online learning and then worked to build cohort and engagement. As educators, each successive delivery also built our own teaching confidence with the tools and interactions. For us, it was the journey of learning together that had been most powerful and which we were determined to maintain as we moved into the next and subsequent teaching terms.

Overall Reflections and Key Learnings

Innovation is continual, and in reality, educators make adjustments each time they teach; as our students change so does our teaching. But in the face of such immediate and disruptive change, by adopting an action learning approach, we were able to systematically plan and observe change in a very short and contracted time frame. Teaching online was not new to us, but by undertaking an action learning approach, we had a structured model to follow which provided security, for it was not just our students who were dealing with social isolation and upheaval caused by the pandemic. Our planning was underpinned by the non-negotiables of course design. Actions taken considered our reflection on experience, observations as well as the qualitative and quantitative data available to

us. Each period of reflection resulted in a series of ‘learnings’ which informed our plans for the next cycle.

New tools continue to become available, and our practices adapt and expand. As the pandemic has continued it was clear online learning was here to stay for the longer term. With online learning now expected, subsequent online cohorts were and are different. The expectations of meeting face to face or the opportunity to move overseas to commence their studies or to come to campus was no longer present—our students were now making the conscious decision to learn in lockdown. Thus, action learning enabled us to continue to adjust our planning and actions based on a scholarly approach that we seek to teach managers. It has led us to continue to develop new activities and materials to on-board students into the course. Adopting action learning as an integrative structure in the course means that we adapt to the changing experiences of our students and remain constant learners ourselves.

Undertaking our teaching processes as an action learning project supported both our learning and the students’ learning during a time of profound upheaval. It was a considered and informed choice to enable and support change, recognising risks and supporting a problem-focused approach that enabled the teaching team to action with the agency. Critics of the action learning process argue that while it can be enacted at a grassroots level, it may lack top management support to enact the resultant and necessary change; however, as the immediate need was to ensure students could keep learning under lockdown conditions and ultimately thrive—not just survive—academics were empowered to enact and explore learning as the problems presented themselves. Action learning provided a pragmatic yet effective, structured approach that would also support organisational learning and development for all involved. The pandemic created a need for change to be accepted and enacted quickly, and action learning is also noted to enable this.

With online delivery now part of the formal and ongoing process of learning, the action learning cycle is critically important for educators. It provides a clear lens and iterative process of continuous improvement. Further, it demands that we move beyond planning and enacting for online delivery, to exploring, reflecting and learning from the outcomes of these actions in an informed manner. Outcomes can be qualitative

such as how the room ‘feels’ or quantitative such as how many students participate. Action learning is now an ongoing part of our teaching delivery. Each class provides data by way of attendance and interaction. For now these remain high. Through the action learning process, we are afforded a structured approach to review and instil change and innovation to our delivery. It has been and will continue to be used to keep our practices refreshed and refined.

Conclusion

While this project was focused on the immediate delivery of the course that term, it is important to note that action learning never really concludes. It is ultimately a mindset, a commitment. Teachers will continue to innovate in the classroom in response to changing situations. The pandemic did not have to result in classrooms designed by panic-gogy, and could maintain core design principles. Action learning provided a scholarly, structured approach to real-time change that can empower resolution by those who must live with the outcomes of the change. Importantly online learning can be interactive and engaging and can support constructivist learning processes.

Students deserve and possibly now expect online learning to be as good or perhaps better than face-to-face learning. Even when faced with a crisis and short implementation time frames, action learning provides a solid process and scholarly approach to support such change. We should never forget that teachers are managers and learners too. We should take ‘own medicine’ by taking a structured approach to reflecting and planning to build our own professional expertise.

References

- Arce, D. G., & Gentile, M. C. (2015). Giving Voice to Values as a Leverage Point in Business Ethics Education. *Journal of Business Ethics*, 131, 535–542. <https://doi.org/10.1007/s10551-014-2470-7>

- Alt, D. (2015). Assessing the contribution of a constructivist learning environment to academic self-efficacy in higher education. *Learning Environments Research*, 18, 47–67. <https://doi.org/10.1007/s10984-015-9174-5>
- Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. *International Review of Research in Open and Distance Learning*, 4(2), 1. <https://doi.org/10.19173/irrodl.v4i2.149>
- Bhatt, S. (2019). *The Attention Deficit : Unintended Consequences of Digital Connectivity* (1st ed.). Palgrave Macmillan.
- Banihashem, S. K., Farrokhnia, M., Badali, M., & Noroozi, O. (2021). The impacts of constructivist learning design and learning analytics on students' engagement and self-regulation. *Innovations in Education and Teaching International*. <https://doi.org/10.1080/14703297.2021.1890634>
- Chickering, A. W., & Gamson, Z. F. (1987). *Seven Principles for Good Practice in Undergraduate Education* (pp. 3–7). American Association for Higher Education.
- Calcagni, E., & Lago, L. (2018). The Three Domains for Dialogue: A framework for analysing dialogic approaches to teaching and learning. *Learning, Culture and Social Interaction*, 18, 1–12. <https://doi.org/10.1016/j.lcsi.2018.03.001>
- De Kock, A., Slegers, P., & Voeten, M. J. M. (2004). Learning and classification of learning environments in secondary education. *Review of Educational Research*, 74(2), 141–170. <https://doi.org/10.3102/00346543074002141>
- DeTienne, K. B., Ellertson, C. F., Ingerson, M. C., & Dudley, W. R. (2021). Moral Development in Business Ethics: An Examination and Critique. *Journal of Business Ethics*, 170, 429–448. <https://doi.org/10.1007/s10551-019-04351-0>
- Gentile, M. C. (2017). Giving Voice to Values: A Pedagogy for Behavioral Ethics. *Journal of Management Education*, 41(4), 469–479. <https://doi.org/10.1177/1052562917700188>
- Gold, J., & Pedler, M. (2022). Bridging research to practice via action learning. *Action Learning: Research and Practice*, 19(1), 3–18. <https://doi.org/10.1080/014767333.2021.2018288>
- Gribble, L., & Wardrop, J. (2021). Maintaining 'incidental' feedback in synchronous online learning environments *Assessment and Feedback in a Post-Pandemic Era: A Time for Learning and Inclusion* Advance HE England
- Harasim, L. (2017). *Learning theory and online technologies*. Routledge.

- Harvard Business Publishers editors. (2021). Exploring the Relevance and efficacy of the case method 100 years later, part 1 of 5 part series: the centennial of the business case, *Harvard Business School Publishing* Boston April 14l
- Raelin, J. A. (2009). Action Learning and Related Modalities. In S. J. Armstrong & C. V. Fukami (Eds.), *The SAGE Handbook of Management Learning, Education and Development* (pp. 419–438). SAGE Publications Ltd.
- Sankey, M.C. (2019). Putting the pedagogic horse in front of the technology cart *ASCILITE Technology Enhanced Learning Blog*, April 4. <https://doi.org/10.13140/RG.2.2.17755.21288>
- Sanyal, C. (2018). Learning, action and solutions in action learning: Investigation of facilitation practice using the concept of living theories. *Action Learning: Research and Practice*, 15(1), 3–17. <https://doi.org/10.1080/14767333.2017.1364223>
- Sedlovskaya, A. (2020). *How to lead uncomfortable class discussions, sample prompts for effectively navigating tough yet necessary classroom conversations*. Harvard Business School Publishing Boston HBS.
- Stephens, S., & Margey, M. (2015). Action learning and executive education: achieving credible personal, practitioner and organisational learning. *Action Learning: Research and Practice.*, 12(1), 37–51. <https://doi.org/10.1080/14767333.2014.993592>
- Volz-Peacock, M., Carson, B., & Marquardt, M. (2016). Action Learning and Leadership Development. *Advances in Developing Human Resources*, 18(3), 318–333. <https://doi.org/10.1177/1523422316645884>
- Zuber-Skerritt, O. (2002). The concept of action learning. *The Learning Organization*, 9(3), 114–124. <https://doi.org/10.1108/09696470210428831>



19

The Impact of COVID-19 on Learning for Final-year Nursing Students

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Introduction

The impact of the COVID-19 pandemic has been severe and particularly for the health and social care sector. For nursing students, this has caused major disruption to their studies and uncertainties about progress through their studies. However, this exceptional situation has also created unique learning opportunities, exposing students to unprecedented circumstances that offer new experiences and encourage resourcefulness and initiative in their practice as they transition to registered practice (Leigh et al., 2020).

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Background and Context

In the UK, nursing students undertake a three-year undergraduate degree programme combining university and healthcare practice placement learning. Mandated by the United Kingdom professional and statutory regulatory body for nursing and midwifery, the Nursing and Midwifery Council and their standards for pre-registration nursing programmes (Nursing and Midwifery Council, 2018), students are required to meet standards of proficiency and achieve a minimum of 4600 hours of clinical and theoretical learning.

For one final-year nursing module, at the University of Gloucestershire, we had created and developed a new partnership approach to learning about service improvement and research methods. Rather than the traditional undergraduate dissertation, opportunities were sourced for students to have a contemporary, authentic and tangible experiences of practice-based evaluation, research and quality improvement techniques where the impact on healthcare delivery for service users and carers was distinct and recognisable. This required collaboration with multi-professional project teams in local health and social care sector settings where research, audit, service evaluation or quality improvement was well established. The intention of this final module was for academic supervisors from the university to work in partnership with practice experts and students, enabling students to participate in real-world evaluation and quality improvement activities relating to specific UK National Health Service Trust-led service improvement projects. Learning outcomes for the module sought demonstration of established critical thinking skills and application of the evidence base to practice; evidence of the importance of systematically evaluating care to ensure that findings help to improve people's experience and care outcomes and shape future service delivery; critical evaluation of contemporary knowledge and evidence to influence change and promote health and best practice. Outputs from this approach, which included student-authored reports and a quality improvement project symposium, were to be shared and presented with local healthcare organisations to inform and impact countywide service evaluation and quality improvement activity.

In 2020, the sudden and necessary cessation of face-to-face teaching thrust students and academic staff into what was, for many, unfamiliar territory. Students were compelled to adapt to online educational delivery. Understandably, given the barriers to collaborative work of this nature caused by COVID-19, reconfigurations of healthcare services to manage the impact of the pandemic and required changes to clinical placements, the original intentions for the module were not possible.

At the same time, rapid change within the healthcare practice learning environment occurred. In the UK, Health Education England, the public organisation overseeing healthcare workforce training and education, asked second- and third-year nursing students to sign up to extended placements (Health Education England, 2020). New emergency standards for pre-registration nursing were introduced, enabling student nurses to voluntarily opt-in to paid extended clinical placements (Nursing and Midwifery Council, 2020). Whilst this gave some students a sense of achievement through 'playing their part and making a difference', feelings of impotence and guilt for students unable to do so were also prevalent (Swift et al., 2020). For final-year nursing students needing to complete and consolidate the necessary skills and proficiencies and transition to registration, this was particularly challenging. In line with the Nursing and Midwifery Council (2020) mandate, three approaches were developed with student involvement and quality assured through the university assessment scrutiny process.

Approach 1 Suspension of placement: A small group of students were unable to go into practice due to a requirement to shield or caring responsibilities for family members. These students continued with theory modules only and submitted a 5000-word service improvement report (with a focus upon the literature rather than on experience with service improvement teams) maintaining contact with their academic supervisor and the module team for support.

Approach 2: Students not meeting criteria for extended placement or choosing not to opt in to extended placement: At the point of the new Nursing and Midwifery Council mandate and options for paid placements, some students had outstanding module work to complete for progression on their degree programme. Others chose not to opt in

to extended placement for personal or professional reasons. These students continued with placement for 80% of their time and spent 20% of their time on the more theoretical aspects of learning (similar to the usual contact hours for the BSc Nursing programme). They were required to complete a modified 3000-word report supported by their academic supervisor (with a focus upon the literature rather than on experience with service improvement teams).

Approach 3 Extended placement: For students who decided to take up the option for full-time paid extended placement, a new assessment approach was necessary. In order to maintain their progression through the programme, these students were required to demonstrate achievement of the module learning outcomes through independent study, completing a Portfolio (2500-words +). They were guided to draw upon current clinical practice examples supported by their academic supervisor and an independent study brief in order to submit evidence of their learning achievements.

Students submitted their assessment requirements in line with the placement approach chosen. Reading their submissions offered further opportunity to recognise the impact for these students and the significance of their achievements. Students taking approach one submitted literature-based service improvement reports. They offered thoughtful and analytical discussion around important service improvement topics. These reports were shared with practice colleagues to inform the restart of their service improvement work. Similarly, for students taking approach two, some of this work was also shared with practice colleagues as a resource for quality improvement initiatives.

Reading the unique and compelling narratives of studying and working through the pandemic that the students taking approach 3 had submitted was both moving and illuminating. Students had clearly been exposed to some extremely challenging and emotive situations. Reflecting upon these situations had presented opportunities to make sense of their experiences, drawing upon the evidence base and considering what this might mean for their future practice. Whilst seen by some as an innovative approach to module assessment, we had not realised the potential impact of the student outputs and the opportunities presented by these

module adaptations. It was agreed with a small group of the students that we should find a way to disseminate the powerful student narratives and a research study was developed to achieve this. Whilst we are still analysing and writing up our research study, this chapter has provided a fantastic opportunity to evaluate the experience and share with readers a snapshot of the experiences and reflections of final-year nursing students, who were learning and working through the initial waves of the pandemic in the UK.

Our Study

We have undertaken a narrative case study (Stake, 2008) of final-year nursing students' experiences of studying and working through a pandemic, focusing upon students who had opted into full-time paid placement work (Approach 3). Ethical approval was sought and agreed from the university ethics committee, recognising the potential impact of the study and commending the innovative approach to teaching and learning for this group of healthcare students.

A purposive sampling strategy was used and students consented to sharing their written assessment work for analysis ($n = 30$), with four of that group becoming members of the research team. Data collection was achieved by accessing written text from student assessment submissions, student reflections and focus groups discussions. Thematic analysis (Braun & Clarke, 2006) of data has enabled us to begin to explore emerging themes.

Working with students/alumni as partners in research, there is potential for a different approach to the traditional academic analysis and evaluation of student experience. Our study offered a negotiated and co-produced opportunity for elucidation of episodes and experiences of practice during the pandemic. Producing shared understandings that are co-authored with colleagues (Healey et al., 2014) is a notable direction for narrative case study in contexts of professional practice education. The resulting themes and excerpts presented here offer new knowledge and understandings of the unique experiences of final-year nursing students.

In the context of writing about clinical practice experience, personal narrative accounts may require questioning of recognised nursing experience. This is something that nursing students do in the form of reflective writing, making sense of their clinical experiences and demonstrating progress in their learning. To write about personal experience can be challenging; to write about it in the context of crisis and complexity whilst having to demonstrate achievement of specific learning outcomes for a programme of nurse education is even more challenging (Denshire & Lee, 2013). However, the very act of reflecting and articulating experience in all its complexity can also provide a cathartic and powerful experience. For the students who had chosen to 'opt in' to paid placement, this was an opportunity to share their experiences and to tell their stories, albeit regulated to some degree by module learning outcomes. The following sections of this chapter offer interpretations of their experience.

Understanding and Interpreting the Evidence to Support Care Delivery

The first theme to emerge related to evidence-based practice where students highlighted the importance of strong evidence to support decision-making and care delivery. Evidence-based care is fundamental to nursing education, recognising that in order to deliver safe and effective care, nurses (and all healthcare professionals) must be able to draw upon the best available research and scientific evidence (Nursing and Midwifery Council, 2018). With the ever-changing clinical situation presented through the pandemic, students suggested that it became increasingly challenging to track, understand and interpret current 'best' evidence. Some students took the focus of compliance with available evidence-based recommendations:

However, on my placement I have seen high compliance with the evidence surrounding PPE. Using the evidence to support care delivery, understanding what that means for wearing of PPE is essential and using local guidelines will help us to achieve this. The introduction of additional infection control support and resources has been really helpful to help us all work

our way through the information ... there is so much and it takes a while to interpret.

Others highlighted the value of evidence for positive action and change:

Covid-19 has impacted and changed everything we do, with policies and procedures being reviewed constantly as new evidence is being found. This has needed clear interpretation and understanding of these new policies to ensure that we are following government and healthcare guidance.

For some students concerns around the use of evidence, dissonance between accepted professional practice, new evidence and rapidly changing guidelines for practice clearly played a part in their daily experience. This challenged the foundations of their knowledge and best practice approaches for safety in situations that they now faced. Interestingly within this theme there was clear acknowledgement of the development of new evidence, recognising the pace at which this was being achieved, quality assured and implemented.

Reasoning, Decision-making and Intuition for Leadership

Through the student narratives and often aligned to discussions of evidence-based practice, there were a number of references to knowledge, decision-making, practical reasoning, intuitive skills and leadership.

Practical reasoning or phronesis and decision-making are fundamental to healthcare practice (Tanner, 2006). The goal of reasoning and decision-making is to provide the highest quality of patient care based on the available resources. According to one student, 'Critical thinking and practical reasoning involves rational and robust analysis of the situation ... sometimes thinking outside of the box'.

Similarly, the challenges of rapid decision-making and leadership were highlighted with recognition of the state of constant change, and the requirement for leaders to make decisions based upon the best available evidence. For some students this was raised as recognition of skill

development, knowing that on registration they would need to be able to do this: ‘using a compassionate and empathetic approach to leadership, using clear structure and guidance, staff will feel engaged and motivated’. For others, there were concerns raised regarding the understanding of how decisions were made and shared. Students identified situations where they had stepped up to lead, and in doing so they recognised the impact of leadership upon individuals and teams: ‘I realised that I was successfully able to lead and motivate the team to adopt the change’.

Collaboration and partnership were characterised as positive attributes for successful leadership and teamwork, and activities such as team debriefing, checking in and clear communication across teams were seen as essential for survival: ‘team debriefing and regular updates improves our ability to deal with difficult situations’. When leadership was less visible students highlighted the concerns, confusions and challenges that this caused: ‘in these circumstances, leadership accessibility and visibility is important to allay fears and support staff to make clinical decisions in incredibly challenging situations’.

One further aspect of these narratives of decision-making was recognition of the importance of intuition as part of the repertoire of knowledge and skills for nurses. Students highlighted numerous examples of the need to balance evidence, risks and benefits where intuitive reasoning was used to lead and support decision-making: ‘using my intuition and the evidence I had gained throughout my training, I was now comfortable with my patient’s appearance and their current health’.

Maintaining Quality and Supporting Improvement in Time of Crisis

Given that the original focus of the module was to gain real-life experience and learn about practice-based evaluation, research and quality improvement techniques, it was not surprising that another key theme was improvement. This is an important feature of care delivery in the UK and increasingly a focus for healthcare professionals looking to embed quality improvement and evaluation methodologies within the workforce (The Health Foundation, 2021).

Within their discussions, students explored their experiences of trying to maintain quality whilst in the midst of change and challenge. For some this was viewed as an opportunity to understand and embrace quality improvement, articulating it as ‘a state of mind rather than a process to be followed’ and ‘an opportunity to support quality improvement and be part of the change’. For others it was a challenge with concerns around the longer-term impact of pausing quality improvement initiatives and the huge effort that would be required to restart and reinvigorate the evaluation and improvement work:

a huge amount of work I think will be needed in order to improve services following the pandemic, and I am concerned about the number of service improvement projects and quality initiatives that may struggle to re-start once resources permit.

All students recognised within their narratives in some way, that the challenges introduced by COVID-19 and the necessary adaptations to healthcare systems required an understanding of change methodologies, human factors and managing complexity.

Challenge

Nurses have always worked in challenging environments and situations, caring for individuals who are unwell, in crisis or nearing the end of their lives. The pandemic has generated new definitions of challenge and without exception all students mentioned challenge as a feature of their experience. For some, this was personal challenge and the requirement to manage personal circumstances, keep family safe and ensure that they followed strict infection-control procedures both in and out of work. Indeed, some students having opted in to full-time placement moved out of their family home to achieve this. For others, professional challenge was a constant feature of their clinical experience, adapting to new ways of working, new environments and teams whilst still a student with learning needs and requirements: ‘I have been able to understand how to improve certain experiences I have had by thinking about my learning

needs and adapting my care delivery to improve patient outcomes'. Challenge also featured as a positive experience supporting learning, helping to understand and focus upon situations and instilling a sense of confidence, capability and shared purpose. Students discussed 'challenging the policy to ensure a more appropriate response to care delivery'. Similarly, they highlighted the value of supported challenge which imbued a sense of 'stepping up', of 'making a difference' and of recognition that they were 'working it out' and 'influencing positive action and change'.

Values and Beliefs in Nursing

Inherent in all student accounts were the traits and distinguishing features of professional practice. Students shared their experiences and aligned features of their placement experiences to the module learning outcomes (as the module team had requested). In doing so, they shared their professional values and beliefs and began to convey the features of skilled and proficient patient care. In essence, they were telling their stories and expressing what it meant to them to be a nurse. As one student suggested:

The experience I have gained during extended placement will stay with me throughout my future career. Much like in the paper by Morgan (2002), I have gained confidence as I have been so well supported throughout ... as well as given so many opportunities to take a leading role, which I feel will make my transition from student nurse into registered nurse slightly less daunting.

Understanding and Theorising the Impact on Learning

For the students who opted in to paid placement, their experiences appear to be closely related to development and learning in three key areas highlighted by the Carnegie Foundation Studies on professional education.

Shulman (2005) describes these signature pedagogies in the practice professions as thinking, performing and acting with integrity. Developing these pedagogies further, Benner and Sutphen's (2007) work highlights performance, contextualisation, interpretation and formation as paradigms to interpret learning for the professions. Their pedagogical model offers a framework through which the students' accounts can be further explored and an understanding sought regarding the impact of the pandemic on learning for student nurses.

Activity theory (Engeström, 2001) emphasises change rather than stability, with its focus on the dynamics of learning rather than on the learner, as a participant in an established system. The principles of activity theory and expansive learning offer a framework through which the learning environment can be explored and opportunities highlighted. Rather than focusing on vertical learning processes, aimed at elevating students upward to higher levels of competence, horizontal or sideways learning and development—described by Engeström (2001) as 'expansive learning'—might offer a complementary perspective (Berragan, 2013). Given the experiences shared by the students, expansive learning and activity theory offer complementary theoretical frameworks through which to explore the students' accounts.

Expansive Learning for the Formation of Nursing Identity: 'Acting with integrity'

Professional identity was important for all participants, enabling students to recognise that they were transitioning to registered nurses (Scholes, 2008). The student nurses demonstrated that they were developing ways of conducting themselves based on their professional skills and judgements, and adapting to unprecedented circumstances and new perceptions of what it meant for them to be a nurse (Benner & Sutphen, 2007). As they engaged with nursing practice in the pandemic, they became attuned to nursing situations, and, rather than simply taking previously learned approaches and acting like nurses, they recognised that they were able to adapt and respond, to lead and challenge, behaving and feeling like nurses. The students were demonstrating an expansive approach to

learning and engaging in what Engeström (2001) calls horizontal or side-ways learning and development (Berragan, 2013).

Expansive Learning for the Interpretation and Contextualisation for Nursing: ‘Thinking’

Many of the students emphasised the importance of establishing the context of care. They highlighted the situated nature of knowledge (Lave & Wenger, 1991) and the need to recognise which aspects of their professional knowledge and skill were relevant to their patient’s rapidly changing situation. The students called this ‘practical reasoning’. Benner and Sutphen (2007) explain that recognising the importance of context enables nurses to be responsive to a particular situation and learn to find their limits.

Both the university and the healthcare settings are contexts that give meaning and coherence to learning. In clinical practice, the primary object of activity is the well-being of the patient. The context of this activity is a busy and demanding environment where it can be difficult for students to find time to reflect on, and thus learn from, an episode of patient care either during or after the event. Learning and working through the pandemic, students were required to rapidly translate what they already knew about the clinical practice setting from previous work experience or university learning, to identify what this may contribute to clinical practice and to determine what the gap or difference might be between current clinical practice and previous learning. It is in this environment that students use the skills of clinical judgement and recognise the influence of contextual factors on the development of that judgement (Benner et al., 2010; Lasater, 2007). In essence, working in placement during the pandemic may have offered an opportunity to support ‘reflective transfer’ (Schon, 1995) or ‘thinking’, enabling students to explore the contradictions (Engeström, 2001) between the activity systems of their current healthcare settings (during the pandemic) and their previous learning experiences, thus rapidly developing their skills of interpretation and contextualisation.

Expansive Learning for the Development of Competent Nursing: 'Performing'

Performance requires context; it requires understanding in action and evidence-based interpretation and involves well-formed, expert practitioners with skills of practical reasoning and clinical judgement (Benner & Sutphen, 2007). There are elements of nursing performance which elude explanation, concealing themselves as intuitive and personal knowledge (Polyani, 1958; Moch, 1990) often embedded in the subconscious until required in a particular clinical situation (Meerabeau, 1992; Berragan, 1998).

One student noted that she felt confident caring for patients through the pandemic and that this extraordinary situation had helped her to improve her professional nursing performance as a newly qualified nurse. Similarly, another student highlighted the performance element of nursing in a reflective account. She described the importance of having 'seen compassionate, transformational leadership, that was inspirational' to her as a now newly qualified nurse, suggesting that this would have a 'lasting impact' as she progressed through her career. One student stated:

Despite the acceleration through Benner's continuum necessitated by the current COVID crisis, I do feel that I have gained more confidence, and more knowledge and understanding to support my professional growth as a competent practitioner. (Benner, 1984)

These participants emphasised the significance of learning and working through the pandemic, interpreting and contextualising the complexities and nuances of nursing in order to develop their professional nursing performance.

Conclusion

Prior to the pandemic it was recognised that within healthcare settings learning was, in a sense, a by-product of care. The healthcare needs of the patient always and necessarily take priority over the educational needs of

the student. Whilst this is still the case, the pandemic has provided the opportunity to change, to adapt and to determine conditions of best practice for learning in a very challenging situation. For some students, the pandemic offered an 'educative environment' which provided opportunities to confront the emotional climate within which nursing care was being delivered and to consider their professional performance. For others the pandemic has offered recognition of the value and importance of nursing knowledge and skills such as practical reasoning, decision-making and intuitive thinking.

In the current context of pressures of workload and reduced placement capacity, learning in practice environments may be difficult to achieve in terms of available support, time and safety. However, it is important that nurse education recognises and captures the powerful learning experience of nursing students over the last few years. Whilst this has been an extremely challenging and difficult time, the opportunities afforded to those students who were able to opt in to clinical placements have been extremely powerful. In order to be effective such an activity needs to be captured and articulated as part of a broader picture, supporting and linking with clinical practice and providing a theoretical foundation for future practice learning. This unprecedented situation in many ways has enabled these students to become nurses.

References

- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley. <https://doi.org/10.1097/00000446-198412000-00025>
- Benner, P., & Sutphen, M. (2007). Learning across the professions: The clergy a case in point. *Journal of Nurse Education*, 46(3), 103–108. <https://doi.org/10.3928/01484834-20070301-03>
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). *Educating nurses: A call for radical transformation*. Jossey-Bass. <https://doi.org/10.3928/01484834-20120402-01>
- Berragan, L. (1998). Nursing practice draws upon several different ways of knowing. *Journal of Clinical Nursing*, 7(3), 209–217. <https://doi.org/10.1046/j.1365-2702.1998.00146.x>

- Berragan, L. (2013). Conceptualising learning through simulation: An expansive approach for professional and personal learning. *Nurse Education in Practice*, 13(4), 250–255. <https://doi.org/10.1016/j.nepr.2013.01.004>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Denshire, S., & Lee, A. (2013). Conceptualizing autoethnography as assemblage: Accounts of occupational therapy practice. *International Journal of Qualitative Methods*, 12, 221–236. <https://doi.org/10.1177/160940691301200110>
- Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14(1), 133–156. <https://doi.org/10.1080/13639080020028747>
- Healey, M., Flint, A., & Harrington, K. (2014). *Engagement through partnership: Students as partners in learning and teaching in higher education*. HEA. <http://repository.londonmet.ac.uk/id/eprint/5176>
- Health Education England. (2020). Nursing and Midwifery Nursing student support guidance during COVID-19. <https://tinyurl.com/y6rtgzf9>
- Lasater, K. (2007). High fidelity simulation and the development of clinical judgement: Students experiences. *Journal of Nursing Education*, 46(6), 269–276. <https://doi.org/10.3928/01484834-20070601-06>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press. <https://doi.org/10.1017/cbo9780511815355>
- Leigh, J., Bolton, M., Cain, K., Harrison, N., Bolton, N. Y., & Ratcliffe, S. (2020). Student experiences of nursing on the front line during the COVID-19 pandemic. *British Journal of Nursing*, 29(13), 788–789. <https://doi.org/10.12968/bjon.2020.29.13.788>
- Meerabeau, L. (1992). Tacit nursing knowledge: An untapped resource or methodological headache? *Journal of Advanced Nursing*, 17(1), 108–112. <https://doi.org/10.1111/j.136-2648.1992.tb01825.x>
- Moch, S. D. (1990). Personal knowing: Evolving research and practice. *Scholarly Inquiry for Nursing Practice*, 4(2), 155–165. <https://doi.org/10.1891/0889-7182.4.2.155>
- Morgan, R. (2002). Giving students the confidence to take part. <https://www.nursingtimes.net/roles/nurse-educators/giving-students-the-confidence-to-take-part-27-08-2002/>
- Nursing and Midwifery Council. (2018). Standards for pre-registration nursing programmes Part 3 of Realising professionalism: Standards for educa-

- tion and training. <https://www.nmc.org.uk/standards/standards-for-nurses/standards-for-pre-registration-nursing-programmes/>
- Nursing and Midwifery Council. (2020). Nursing and Midwifery Council response to the Covid-19 emergency. <https://www.nmc.org.uk/globalassets/sitedocuments/councilpapersanddocuments/council-2020/item-6-nmc-response-to-the-covid-19-emergency.pdf>
- Polyani, M. (1958). *Personal knowledge: Towards a post-critical philosophy*. Chicago University Press. <https://philpapers.org/go.pl?id=POLPKT&proxyId=&u=https%3A%2F%2Fdx.doi.org%2F10.2307%2F2105069>
- Schon, D. A. (1995). Knowing in action: The new scholarship requires a new epistemology. *Change: The Magazine of Higher Learning*, 27(6), 27–34. <https://doi.org/10.1080/00091383.1995.10544673>
- Scholes, J. (2008). Coping with professional identity crisis: Is building resilience the answer? *International Journal of Nursing Studies*, 45(7), 975–978
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus On Professions and Professionals*, 134(3), 52–59. <https://doi.org/10.1162/0011526054622015>
- Stake, R. E. (2008). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 119–149). Sage Publications, Inc. http://scholar.google.com/scholar_lookup?hl=en&publication_year=2005&pages=443-466&author=R.+E.+Stake&title=The+Sage+handbook+of+qualitative+research
- Swift, A., Banks, L., Baleswaran, A., Cooke, N., Little, C., Mgrath, L., Meechan-Rogers, R., Neve, A., Rees, H., Tomlinson, A., & Williams, G. (2020). COVID-19 and student nurses: A view from England. *Journal of Clinical Nursing*, 29(17–18), 3111–3114. <https://doi.org/10.1111/jocn.15298>
- Tanner, C. A. (2006). Thinking like a nurse: A research-based model of clinical judgment in nursing. *Journal of Nursing Education*, 45(6), 204–211. <https://doi.org/10.3928/01484834-20060601-04>
- The Health Foundation. (2021). Quality improvement made simple: What everyone should know about health care quality improvement. <https://www.health.org.uk/publications/quality-improvement-made-simple>



20

Pivoting a Business School's Teaching Online

Barry Avery and Hilary Wason

Introduction

The sudden and immediate lockdown in the United Kingdom in February 2020 resulted in the closure of higher education institutions with little or no warning. Thousands of students in the middle of their academic year suddenly found themselves being part of online learning with synchronous teaching using video conferencing and rewritten assessments and exams introduced to accommodate the sudden lack of physical presence on campus.

After struggling through the changes that were hurriedly implemented to finish their teaching, educators started to think about the longer-term plans that would need to be implemented to move from emergency remote teaching to online learning (Hodges et al., 2020). A robust solution was needed to deal with intermittent student and staff attendance, much reduced face-to-face sessions and the possibilities of a sudden

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switch back to fully online teaching if a second lockdown occurred in the autumn period.

This chapter details the strategy we implemented in our Business School. This encompasses how local decision-making had to respond to both local university and wider governmental strategy; the planning, teaching and learning frameworks that we used; the staff training that occurred; and the practical effects of these approaches in the rapidly changing environment. Data have been collected from mixed method sources including learning analytics; measures of attendance and participation; staff and student module feedback; and questionnaires.

About Us

The Business School at Kingston University near London in the United Kingdom is one of the largest schools at the university, with both undergraduate and postgraduate students. Pre-pandemic the attendance for most first-year lectures had typically been 50–70%, indicating a high ‘churn’ rate for physical presence with many students not attending every session and using the learning management system for missed materials. This is a common characteristic of our student base with 60% commuting across the Greater London area, with travel times ranging from 30 minutes to two hours. Previous analysis shows 59% of the first-year students ($n=155$) reported they were working with 24% working 14 hours or more a week (Avery & Lees, 2019).

Pedagogic Practices Pre-pandemic

In recent years the school has moved away from lecturing, with more tutorials, workshops and active classroom activities. Case studies, flipped learning and simulations are common, with experimentation encouraged to align with discipline areas.

Technology-enhanced learning practices have been embedded throughout the institution, with investments in the Canvas learning management system and a blended learning approach (Garrison & Kanuka, 2004;

Martyn, 2003; Singh, 2003). E-learning technologists are available to assist the staff (Ooms et al., 2008); however, the blended approach is seen as supplementary to face-to-face delivery, which has remained a priority in the overall student experience. Templates are used in the learning management system to ensure consistency in design and structure for every module, with the staff customising them to match their own delivery and activities. Despite an increase in the use of this system for distributing teaching materials, the use of the more sophisticated collaborative tools such as social media, blogs and wikis remained low pre-pandemic. Like most institutions, learning management system usage statistics broken down by feature are not in the public domain; however, Kingston's figures align with those institutions that do publish these details (Ashford-Rowe, 2013; University of Queensland, 2013).

Pedagogic Approach

The overarching pedagogic strategies used in the school seek to improve practice with the belief that the change process should be emancipatory for all participants. Approaches taken have to fulfil a number of agreed institutional criteria with a pragmatic strategy that is both practical and will work within the confines of the local resources. Translating abstract pedagogic frameworks into actual practices can be problematic for novices (Kali et al., 2011), so pedagogic models are advocated with practical examples in the form of activities that can be used but also situated in the technology that is available.

The university guaranteed that in the forthcoming academic year a proportion of teaching within each course would be face to face; many students had signalled that they regarded face-to-face teaching as a vital part of the university experience and did not want a 100% online delivery pattern. Actual implementation strategy was devolved down to each school. Alongside this the local decision was taken for all teaching sessions, in either face-to-face or online form, to have an online asynchronous representation which would be accessible to students who could not attend. Many international students indicated that variations in local lockdown procedure would prohibit them returning to the UK. We also

anticipated that students would transition between physical attendance and online studying if they became ill or were isolating. This also allowed for the possibilities of a 100% pivot to online teaching, in the event of a second lockdown.

With the requirement to add time for cleaning and a reduction in room capacity to accommodate social distancing measures, the existing timetable would not fit into the traditional 9 to 5 working day. After looking at the possibilities of repeating sessions and extending the academic day into the evening, an alternative was chosen—each module would have an approach combining face-to-face and online components of the same length. By structuring this carefully, this allowed students to attend two or three days a week, supported by online synchronous classes delivered through video conferencing software for the rest of the timetable. Choosing a 90-minute class length allowed for a 30-minute cleaning period and for student's timetables to still function in the traditional daytime pattern. This hybrid model (UNESCO, 2021) would have on-campus classroom-based teaching, synchronous activities (online lecturing/tutorials and workshops) and asynchronous activities (online formative work, reading, interacting with peers, problem and enquiry-based learning, work-based research). Together this combined to match the delivery expectations of the pre-pandemic timetable of (typically) 180 minutes per module per week.

Pedagogic approaches derived from Networked Learning, the Community of Inquiry framework and the ABC Design framework were chosen as the basis for this hybrid delivery. Networked Learning is learning in which information and communications technology is used to promote connection. This can happen between one learner and other learners, between learners and tutors and between a learning community and its learning resources (Jones et al., 2000). The definition of Networked Learning emerged from work on computer-mediated communication and computer-supported collaborative learning where the convergence of technologies and telecommunications opened up a new range of educational designs, breaking down the barriers of time and location (Steeple et al., 2002). Networked Learning is agnostic to the underlying community model that it is used within; it seeks to establish connections, rather

than a shared practice such as that promoted in Communities of Practice (Ryberg & Larsen, 2008).

The Community of Inquiry framework evolved and developed from research into the processes and presences apparent in computer-mediated communication (Garrison & Anderson, 2003; Garrison & Arbaugh, 2007). A large and growing body of literature has developed the framework into a popular way of judging the quality and nature of critical discourse (Garrison et al., 2001), in part due to the well-defined accompanying methodology and set of methods. Community of Inquiry uses the notion of three presences defined with categories and indicators.

Cognitive presence signals the actual learning taking place using construction and meaning-making through sustained discourse and reflection (Garrison et al., 2001). Social presence is a measure of group identification and how successfully personal and affective relationships progress. Teacher presence is indicated by facilitating discourse; instructional design and organisation; and direct instruction (Anderson et al., 2001). While social presence can enhance cognitive presence, the challenges implicit in attempting to encourage it in synchronous-based mediums are acknowledged (Garrison, 2011). Networked Learning has been used in a Community of Inquiry framework to enhance social presence.

Overarching this was the ABC learning design process (Young & Perović, 2016) derived from Diana Laurillard's Conversational Framework (2012). During the design process learning activities are planned and pinned to teaching sessions; from this the overall shape of taught interactions then becomes clear in terms of six learning types—acquisition (read/watch/listen), inquiry, practice, production, discussion and collaboration (Table 20.1)

In our implementation these learning types were framed with a Community of Inquiry and Networked Learning, articulating to staff the importance of a balance between the three presences. It was emphasised that an over-reliance on pre-recorded videos could reduce teacher presence and social presence; how an overemphasis on teacher presence could reduce social presence; how an imbalance between the presences could have a consequential effect of reducing inter-student interaction and community growth. Activities that promote Networked Learning in the learning design were embedded into the ABC toolkit examples.

Table 20.1 Example activities in the ABC learning design process

Acquisition	Collaboration	Discussion	Investigation	Practice	Production
Read learning materials (papers, journals, books, websites).	Participate in online forums, wikis, chat rooms, etc. for discussing others' outputs.	Posting and replying to asynchronous discussion forums.	Use online advice and guidance.	Interact with content and media (animations, 3D models).	Produce documents (wikis, documents).
Listen to audio, podcasts, webcasts.	Brainstorm using online mind map.	Guest online discussion with an expert.	Analyse the ideas and information in a range of digital resources.	Computer simulations.	Design artefacts using digital tools.
Watch recorded lectures.	Share and discuss others' outputs using digital annotation/discussion tools.	Synchronous text chat.	Collect data through digital systems (online surveys, video, audio).	Case studies.	Video performances, audio podcasts.
Watch short videos, animations, knowledge clips.	Evaluate and provide peer feedback using online tools.	Synchronous audio and video chat (web conferencing).	Classify and analyse data using digital tools (qualitative, quantitative software).	Virtual lab.	Produce 3D models and simulations.
Observe live video streams (e.g. virtual field trip/demo).	Participate in a social network with a history of contributions.	Screen sharing with audio.	Compare and critique digital texts.	Virtual field trip.	Create image slideshows.

Attend class (webinars, virtual classrooms).	Online voting (or polls).	Use online tools to search for and evaluate information and ideas.	Interact with others in a micro world.	Blogs.
Read discussion posts.		Take digital notes.	Online role-play.	E-Portfolios.
		Contribute to distributed research project.	Quiz with formative feedback.	Presentations containing audio narration.
			Guided self-reflection activities using collated digital feedback.	Curate and share objects using online tools.
				Adapt existing digital materials to form new works.

Networked Learning was used as an anchor for enhancing the social presence, for example in suggesting reoccurring small learning sets designed to enhance online community growth which would be particularly important during the initial parts of each module.

Artefacts created during the staff development process would serve as indicators of the equivalency of the pre- and post-pandemic delivery. As these were created by course teams they were shared, archived and retained as evidence for accreditation purposes, as well as being applicable in the event of value for money arguments occurring if students felt short-changed by the different delivery patterns.

Implementation

It was important to allow each course team a degree of autonomy over implementation; so to support this every team had their own development sessions. These meetings used principles of Networked Learning to reinforce connections and a sense of community amongst the course members themselves.

The training sessions were designed to ensure alignment with university learning and teaching philosophies and approaches, with course teams having two 2-hour sessions. The first introduced the baseline principles and the conceptual underpinnings that would form the basis of teaching. The second session demonstrated practical implementation suggestions with example activities from the learning management system illustrating best practice. After this local training, central university's support departments offered training sessions with a focus on integrating the available technologies (learning management system, video conferencing and video archiving software).

Sessions covered:

- The Community of Inquiry framework; how the notion of the cognitive, social and teacher presence is a key indicator of success in online teaching
- Blended learning and hybrid learning patterns; how to sequence and use activities in both the online and face-to-face space

- Technical skills such as converting lectures into online videos
- Collaborative and cooperative activities that can be used in online teaching
- Using Networked Learning to enhance the social presence in the online space; using learning sets to enhance online community growth
- The use of the ABC design modeller to describe teaching activities

Each course team was tasked with developing their own ABC designs for each module, initially for the first half of the forthcoming year. By co-producing these plans, the possibility of overloading and repetition of learning activities was reduced. The original ABC workshops were constructed to be delivered face to face, with processes built out of writing on cards. Our customised approach focussed on transitioning our pre-existing courses to the new delivery style and were themselves delivered through online synchronous sessions with a customised spreadsheet implementing ABC designs with Networked Learning-based activities. A dedicated Canvas module for the Business School was used for this process. A by-product of this would be an increase in staff familiarity with the tools and techniques they would themselves be using in the forthcoming year.

A breadth of differing formative and summative assessment methods can augment efforts at tackling attainment gaps and the school had steadily moved towards these prior to the pandemic. Staff were tasked with evaluating these assessment methods to see if they would still work in the hybrid approach; traditional reports and assignments remained largely untouched. Presentations and more interactive assessment types were translated into an online equivalent, for example, creating a video or facilitating an online discussion. Some exams were translated into coursework equivalents; some exams ran online. Standard university quality processes were applied during these changes to ensure the validity of the chosen approaches.

As part of the quality assurance process, the school runs a peer-based teaching observation with triads of staff observing classroom activities. This scheme was put on hold due to the university policy of discouraging on-campus attendance outside teaching activities. Focus was redirected to the learning management system where most interactions for students

would occur for the year. A detailed proscribed list of activity, style and minimum requirements for every module was distributed. Modules were evaluated against this, and course teams were tasked with ensuring consistency in approach.

Evaluation

Evaluation of this change has been derived from a thematic analysis (Braun & Clarke, 2006) of staff and student comments in forums, temperature-taking sessions and feedback questionnaires. Quantitative measures have come from questionnaires and analytics from the learning management system. Gathering results from module evaluation questionnaires has proved difficult. Students were less likely to fill them out when not physically present on campus. This was in spite of repeated reminders through app alerts and at the local module level, with staff reminding students to fill them out during synchronous online sessions.

The Initial CPD and the Overall Approach

Of the 72 business staff, 53 attended mandatory training sessions or offered pre-recorded video tutorials. These sessions occurred towards the end of the academic year, giving staff three months to collaborate and reflect on their ABC learning designs. Feedback on the toolkit was used to rapidly innovate features such as more examples and the ability to more precisely specify the length of learning activities. Although the majority of staff feedback was positive there was some resistance with a degree of folk pedagogy (Olson & Bruner, 1998), where staff suggested that moving traditional lectures online would be sufficient. This was identified in areas where there were feelings that decisions about delivery were being taken away from them, resulting in a reduction in staff agency. Most teams completed and collated learning designs quite rapidly, with the intention that staff could then focus on mastering the changes required in their skill sets. Requests for training were centred around practical skills such as editing videos and using particular features of the

learning management system. Many alternative technologies were suggested by staff, with few focussing on alternative pedagogic approaches.

Teaching during the First Teaching Period

Moving through the first part of the year, teaching consisted of face-to-face, synchronous and asynchronous online components. Student attendance on campus for many modules was 30–35%, with some outliers where attendance was higher. Peaks in initial attendance were followed with some students opting out of physically attending campus and switching to the online equivalent, giving a tail-off of classroom activity. Postgraduate students tended to prefer the balance between online synchronous and campus-based activities, with higher attendance online. This was especially pronounced amongst those in part-time courses. Undergraduate students were split between those that enjoyed the balance and those that argued that it was ‘not what we signed up for’. Despite the purpose of each session being mapped out in the learning design process and reflected in the learning management system templates, some undergraduates were initially confused about the nature of the sessions, expecting the online synchronous and asynchronous materials to be mirrors (repeats) of the face-to-face classes.

Midway through the first teaching period it became apparent that we were entering another lockdown which lasted for the rest of the academic year. The timetable was maintained by pivoting all face-to-face sessions into synchronous online mode, so that each student received two 90-minute videoconference sessions per module spaced out across the week.

Feedback from Staff

‘before the first online session it was like being back at the start of my teaching career’—Associate Professor with 25 years of experience

Staff found the teaching preparation different and intensive while navigating the interplays of the different IT platforms complex. Two approaches

were used to capture sessions where students could not attend. Staff elected either to pre-record 10–15-minute sections or to record live synchronous sessions and to post-edit them into bite-sized activities. The latter required forward structuring so that material could serve in the immediacy of the synchronous session but also asynchronously. Student expectations evolved around consistency in teaching style. Staff who changed delivery, for example not supplying video one week, generated comments or, in more extreme cases, complaints. As the use of breakout rooms became available in the videoconferencing software, staff reported a reluctance of some students to participate in them. Staff suggested that modules with higher levels of asynchronous activities, including bite-sized videos, reduced participation in synchronous classes. However, participation levels in synchronous classes were not measurable during the first part of the academic year as this functionality was not available in the videoconferencing software.

During the staff training, small learning sets were advocated, particularly where the large numbers of students in a module would make the synchronous online sessions difficult to manage. Where smaller collaborative groups were used, they did increase participation and connections between students. Unfortunately, the churn rate of student attendance, both online and in class, limited learning set usage. Without an integration across the university systems, it was very difficult to match student groupings in class to those online, reducing the effectiveness of this approach.

In synchronous classes, the lack of an online avatar or student webcam picture hindered the fostering of social presence. An institution-level decision was taken to not require students to use webcams, acknowledging digital poverty issues such as some students not having bandwidth or appropriate physical space. Staff reported that the consequences were a number of sessions where social interaction was very much reduced with a consequential reduction in perceived student presence.

A small number of staff experimented with live streaming from class, delivering synchronous online and face-to-face teaching simultaneously. This was widely regarded as being unsatisfying, with staff finding the complexities of moderating two separate disjoint groups too complex. This was exacerbated when combined with handling the technical aspects concurrently. It was reported that in at least two sessions the class physically attending switched to online participation despite being co-located in a classroom.

Feedback from Students

Student module evaluation questionnaires (MEQs) were gathered at the end of the academic year, with 2437 responses across the 147 modules where results were reported. Response rates tended to be lower with at least ten modules in each taught subject area failing to hit the reporting threshold. Quantitative measures of organisation, approachability, clarity and support have all marginally increased with 125 modules having good or very good ratings. Similar scores are present for teaching, assessment and feedback. Twenty-two modules fall into the average category with only one module having responses where more urgent measures will need to be implemented. For the question, 'The way the module is taught is helping me to learn', the majority of students responded favourably, with the same or improved evaluations in 79–86% of the modules across all levels compared to the pre-pandemic values. Two of the five undergraduate degrees moved into the top ten across the whole university in terms of overall student satisfaction.

Analysis of comments suggests a majority of responses that were not dissimilar from previous years. There were reoccurring concerns, for example, assessment timings, levels of guidance and changes in timetable. Approaches appreciated by students included the use of small bite-sized videos, guest speakers and collaboration tools such as online office suites and group chat/team chat software. The focus on ensuring that assessments were accessible was highlighted, and online assessment clinics were valued.

Comments on the change in delivery returned a bimodal response from undergraduate students. Some preferred the initial mixed mode of attendance, which only required two or three days of physical attendance on campus. Others found learning online at home problematic and looked forward to returning to as much on campus activity as quickly as possible. Those in the first year of entry were more likely to talk about changes in delivery than final-year undergraduate or postgraduate students. Three students argued for fee reimbursement or made 'value for money' comments which is a considerably lower response than reported in other, wider surveys (Mari, 2021).

Student discussions on the difficulties of engagement and interaction were often framed in terms of missing being and participating in activities, both in and outside class. Part-time students, who are almost all postgraduates, were more likely to support the changes in delivery, and the increase in the quantitative scores for these students was higher than those for undergraduate students. Staff reported a perception of student fatigue, but evidence of this was missing from student feedback.

Summary

The positive feedback on our approach from staff and students has been encouraging and suggests that a pragmatic combination of pedagogy, design and practical approaches worked well over the year. The ABC Design toolkit provided a collaborative way for course teams to think about and to then design activities for the year. The Community of Inquiry model equipped staff with a framework, concepts and a vocabulary to evaluate their own practice and pedagogical knowledge (Rapanta et al., 2020). Staff used Networked Learning less explicitly in practice and in their evaluations, but the concepts were implicitly embedded in learning activities. Providing example activities as a source of inspiration for staff was important. Skill training around practical skills such as editing videos and using less well-used features of the learning management system was vital, but this came after the pedagogic underpinnings were in place. The common belief that technology will provide simple solutions can be seen in the focus on alternative technologies frequently suggested by staff, but these should come after appropriate pedagogic approaches have been embedded.

Some practices were less successful; streaming live classes was too complex without a facilitator to accompany the lecture; measures of engagement, such as marks for participation, need to be translated into an appropriate form that works in hybrid learning. There is mixed evidence on the way that lecture capture affects physical attendance (Nordmann et al., 2019). Staff suggestions that videos reduced synchronous participation online will be worth investigating further, along with determining which evaluation measures would be appropriate in these scenarios

(Benigno & Trentin, 2000). For many students the pandemic meant losing the on-campus culture completely; our focus on managing the in-class interactions leaves questions unanswered about what the form of this out-of-class space should look like in a hybrid teaching experience, which is an important part of the post-high school liminal experience (Guppy et al., 2022). Despite some students asking for a return to face-to-face teaching on campus, it should be remembered that a churn rate for attendance existed pre-pandemic.

Going forward conditions for the forthcoming year are still uncertain. For the Business School this makes it unlikely that we will have a complete return to pre-pandemic delivery patterns. Timetable designs have been opened up to allow for more flexibility, with staff asked to draw up alternate plans for fully online, fully face to face or a hybrid mixture with a consistent course-driven approach.

Although forming plans from the response to such an abrupt pivot may be problematic (Bartolic et al., 2021), our training for the following year will focus on embedding the good practice that has been developed going forward. We will explore ways in which staff can use the rich body of materials created this year in innovative ways, using principles of flipped learning to pre-teach and move further away from a didactic lecture model further cementing the use of blended/hybrid pedagogies in courses (Guppy et al., 2022). Staff have commented that they have been pushed into acquiring new skills—presenting online, facilitating online meetings, developing online participation skills. The obvious next step is to ensure that we are equipping students with similar skill sets for whatever the new normal becomes (Levenson, 2020).

References

- Anderson, T., Liam, R., Garrison, D. R., & Archer, W. (2001). Assessing teacher presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1–17. <https://doi.org/10.24059/olj.v5i2.1875>
- Ashford-Rowe, K. (2013). Project Background: The LMS Usage Framework. Retrieved September 9, 2015, from <http://eprints.utas.edu.au/16511>.

- Avery, B., & Lees, R. (2019). Commuter students: are you local? Paper presented at the Society for Research into Higher Education (SRHE) Annual Research Conference 2019: Creativity, Criticality and Conformity in Higher Education, Newport.
- Avery, B., Lees, R., & Russell, D. (2019). Empowering students through co-creation, continuity and continuous assessment. In S. Mawani & A. Mukadam (Eds.), *Student empowerment in higher education: Reflecting on teaching practice and learner engagement* (pp. 439–452). Logos Verlag.
- Bartolic, S., Boud, D., Agapito, J., Verpoorten, D., Williams, S., Lutze-Mann, L., Matzat, U., Moreno, M., Polly, P., Tai, J., Marsh, H., Lin, L., Burgess, J., Habtu, S., Rodrigo, M., Roth, M., Heap, T., & Guppy, T. (2021). A multi-institutional assessment of changes in higher education teaching and learning in the face of COVID-19. *Educational Review*. <https://doi.org/10.1080/00131911.2021.1955830>
- Benigno, V., & Trentin, G. (2000). The evaluation of online courses. *Journal of Computer Assisted Learning*, 16(3), 259–270. <https://doi.org/10.1046/j.1365-2729.2000.00137.x>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Garrison, D. R. (2011). *E-Learning in the 21st Century* (2nd ed.). Routledge.
- Garrison, D. R., & Anderson, T. (2003). *E-Learning in the 21st century* (1st ed.). Routledge/Falmer.
- Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, 10(3), 157–172. <https://doi.org/10.1016/j.iheduc.2007.04.001>
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95–105. <https://doi.org/10.1016/j.iheduc.2007.04.001>
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking and computer conferencing: a model and tool to access cognitive presence. *American Journal of Distance Education*, 15(1), 7–23. <https://doi.org/10.1080/08923640109527071>
- Guppy, N., Verpoorten, D., Boud, D., Lin, L., Tai, J., & Bartolic, S. (2022). The post-COVID-19 future of digital learning in higher education: Views from educators, students, and other professionals in six countries. *British Journal of Educational Technology*, 00, 1–16. <https://doi.org/10.1111/bjet.13212>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. Educause.

- Retrieved March 27, 2021, from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.
- Jones, C., Asensio, M., & Goodyear, P. (2000). Networked learning in higher education: practitioners' perspectives. *ALT-J, Research in Learning Technology*, 8(2), 18–28. <https://doi.org/10.1080/0968776000080203>
- Kali, Y., Goodyear, P., & Markauskaite, L. (2011). Researching design practices and design cognition: Contexts, experiences and pedagogical knowledge-in-pieces. *Learning, Media and Technology*, 36(2), 129–149. <https://doi.org/10.1080/17439884.2011.553621>
- Laurillard, D. (2012). *Teaching as a Design Science*. Routledge.
- Levenson, A. (2020). A Long Time Until the Economic New Normal. MIT Sloan Management Review. Retrieved March 3, 2021, from <https://sloanreview.mit.edu/article/a-long-time-until-the-economic-new-normal>.
- Mari, A. (2021). University students adapt to remote learning but question value for money. Computer Weekly. Retrieved March 3, 2021, from <https://www.computerweekly.com/news/252499105/University-students-adapt-to-remote-learning-but-question-value-for-money>.
- Martyn, M. (2003). The Hybrid Online Model: Good Practice. *Educause Quarterly*, 26(1), 18–23.
- Nordmann, E., Calder, C., Bishop, P., Irwin, A., & Comber, D. (2019). Turn up, tune in, don't drop out: The relationship between lecture attendance, use of lecture recordings, and achievement at different levels of study. *Higher Education*, 77(6), 1065–1084. <https://doi.org/10.1007/s10734-018-0320-8>
- Olson, D. R., & Bruner, J. S. (1998). Folk Psychology and Folk Pedagogy. In D. R. Olson & N. Torrence (Eds.), *The Handbook of Education and Human Development* (pp. 7–27). Blackwell.
- Ooms, A., Burke, L., Linsey, T., & Shrestha, C. H. (2008). Introducing e-developers to support a university's blended learning developments. *ALT-J Research in Learning*, 16, 111–122. <https://doi.org/10.1080/09687760802316307>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2(3), 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Ryberg, T., & Larsen, M. C. (2008). Networked identities: understanding relationships between strong and weak ties in networked environments. *Journal of Computer Assisted Learning*, 24(2), 103–115. <https://doi.org/10.1111/j.1365-2729.2007.00272.x>

- Singh, H. (2003). Building effective blended learning programs. *Educational Technology*, 43(6), 51–54. <https://doi.org/10.4018/978-1-7998-7607-6.ch002>
- Steeple, C., Jones, C., & Goodyear, P. (2002). Beyond E-learning. In C. Steeple & C. Jones (Eds.), *Networked Learning: Perspectives and issues* (pp. 323–341). Springer. https://doi.org/10.1007/978-1-4471-0181-9_19
- UNESCO. (2021). COVID-19 response—Hybrid learning. Retrieved March 5, 2021, from <https://en.unesco.org/sites/default/files/unesco-covid-19-response-toolkit-hybrid-learning.pdf>.
- University of Queensland. (2013). eLearning statistics report. Retrieved September 5, 2016, from <http://www.elearning.uq.edu.au/content/elearning-statistics-report-april-2013>.
- Young, C., & Perović, N. (2016). Rapid and Creative Course Design: As Easy as ABC? *Procedia—Social and Behavioral Sciences*, 228, 390–395. <https://doi.org/10.1016/j.sbspro.2016.07.058>



21

Designing a Collaborative Online Learning Experience to Train Graduate Teaching Assistants Using a Sociocultural Framework

Julie King, Manjula Silva, and Rebecca White

Introduction

When the first lockdown was imposed and teaching shifted online, one could either feel fragile or be agile. Like many, we seized the moment to do what we did but a little better. This case study describes how we moved our Graduate Teaching Assistant (GTA) training session online, how our efforts were perceived by the Graduate Teaching Assistants and what we learnt for our teaching post-COVID.

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Contextual Background

Imperial College London focuses exclusively on science, engineering, medicine and business. Like most universities, Imperial hires a diverse group of doctoral candidates as Graduate Teaching Assistants to assist undergraduates and Master's students in various teaching and learning situations. One challenge with science Graduate Teaching Assistants is providing training for teaching in a context where research is the main focus (Gardner & Jones, 2011). Many faculties think hands-on experience alone creates effective teaching (Luft et al., 2004), and science Graduate Teaching Assistants often come to believe they need only content knowledge to teach and place little value on academic discourse. The resultant lack of awareness of effective communication inevitably impacts not only their ability to teach, assess and give feedback on written work (Silva, 2018) but also their own writing competence.

Three years ago, Manjula Silva (Department of Materials) recognised this imbalance and approached Julie King (Centre for Academic English) to collaborate on targeted support for their Graduate Teaching Assistants. This was because EAP (English for Academic Purposes) practitioners have the requisite knowledge of academic discourse as well as competencies to develop 'students' understanding of approaches to interpreting and responding to the requirements of academic tasks and their related processes' (BALEAP, 2008). These Graduate Teaching Assistants support about 450 undergraduate and MSc students with academic tasks such as discussions, lab reports and literature reviews. Knowing these Graduate Teaching Assistants were extremely time poor and might not willingly attend a session without multiple benefits, Julie and Rebecca White designed and delivered a session that would help them as Graduate Teaching Assistants and as science writers.

Before shifting online, the only practicable approach seemed to be a one-off face-to-face 90-minute classroom session. The session highlighted the features of effective engineering writing and introduced strategies for identifying issues and giving clear feedback. This largely teacher-led, information-driven input was interspersed with small-group work, where new and experienced Graduate Teaching Assistants applied the input to

undergraduate texts. Despite feedback from Graduate Teaching Assistants being consistently positive, the three of us revised our learning design for the sudden shift online as we felt this approach would not translate well: it is vital to provide quality learning environments that meet the needs of distance learners (Gallien & Oomen-Early, 2008), and educators should focus on teaching methods where learners can sense social presence in the online setting (Plante & Asselin, 2014). Fortunately, going online removed the pressures of room bookings and the need for Graduate Teaching Assistants to be on campus, but it also presented others such as physical separation, the removal of kinaesthetics to engage participants and possible screen fatigue.

Our Response: A New Design for Online Learning

We adopted a sociocultural learning approach to redeveloping the session so that the Graduate Teaching Assistants would get a richer, more engaging and more productive online learning experience. Sociocultural theories developed from Vygotsky (1978) propose learning is an active, social practice, with context playing an important role. Vygotsky's notion of proximal development suggests that learning develops through interaction and learning experiences with others in a social environment, and that cognitive development is a social construct where the expert supports the novice. The expert uses scaffolding to support and guide the student to a higher cognitive level, gradually removing it to allow them to function more autonomously. Thus, adequate scaffolding allows the learner to enter the zone of proximal development (ZPD), that is, 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978, p. 86).

Grounding our work within this sociocultural framework, we developed a session that would facilitate communication, encourage teamwork between expert and novice Graduate Teaching Assistants as they

collaborated on scaffolded tasks, and build community. Ideally, we would have studied ‘the roles that a variety of technological tools play in promoting more effective social interaction and growth of a learning community’ (Brindley et al., 2009, p. 173), but time was short, and so we had to work with what we knew and had: Microsoft Teams collaboration software.

We experimented with Teams and the OneNote app to foreground and expand the collaborative learning, noting the affordances for collaborative group work as outlined by Ruthotto et al. (2020), including screen sharing, webcams, use of emoticons during live chat and reactions to others’ contributions. We then decided to split the session into two. The first part, the original teacher-led input, was flipped into an asynchronous learning activity released via OneNote in preparation for a live session a week later. Explanatory documents and a video scaffolded the students into using Teams and OneNote and into the activity. Students then spent 30 minutes analysing anonymised undergraduate lab reports to identify the key linguistic features. We followed Hall’s sociocultural learning design (2007) in which input comes first, as ‘learners must first learn and understand before they can share their constructs with others’ (p. 95), followed by authentic tasks that develop criticality and ‘enable learners to function as a community’ (p. 100).

For the second part, the Graduate Teaching Assistants joined the three tutors in a two-hour Teams session. We encouraged ‘cameras-on’ to build community, dealt with any questions and then set up a collaborative task in the private Teams channels. The Graduate Teaching Assistants were randomly divided into groups of three to four students per channel and were asked to take on timekeeper and notetaker roles. To encourage participation and remove the threat of the ‘digital footprint’, we decided not to record these sessions (Mitchell, 2021). The Graduate Teaching Assistants discussed questions designed to draw their attention to particular aspects of academic communication within each text. This helped create cognitive conflicts, or ‘situations where earlier knowledge constructs are not sufficient’ (Vesisenaho et al., 2010, p. 274), which the Graduate Teaching Assistants resolved by pooling their knowledge, understanding and perspectives.

The Graduate Teaching Assistants then compared their notes to reach a consensus and produce appropriate feedback. They worked autonomously

with their peers, but tutor expertise was available via the chat function and our monitoring of the discussions. The advantages of such collaborative learning are widely noted: learners are more active (Vesisenaho et al., 2010); the learning experience is enriched through participant contributions (Palloff & Pratt, 2005); and with authentic tasks, learners can ‘develop the kinds of cognitive skills necessary to be an effective practitioner in that field’ (Hall, 2007, p. 97). These skills include higher-order thinking, self-reflection and co-construction of knowledge in a group bonding process (Brindley et al., 2009, p. 2). After this activity, all Graduate Teaching Assistants returned to the main channel to feedback and reflect on how this knowledge could be implemented in future. Formal feedback on the session was gathered via Microsoft Forms.

Gaining the Graduate Teaching Assistant Perspective: Research Procedure

Whilst the feedback form provided a general sense of how the session went, we wanted a deeper understanding of the Graduate Teaching Assistants’ experience. Sun and Chen’s review of research into effective online learning (2016) highlights a lack of focus on the learner experience, and so our work responds to their call for more studies to examine online learning design—here, collaborative learning design—from the perspective of learners who had not explicitly chosen to study online.

Graduate Teaching Assistants who had attended one of six iterations of the session (averaging 10–12 participants per session) were invited to participate in one of two focus groups (averaging 4 participants in each). We then arranged a further three individual interviews to probe more deeply into some of the emergent themes. To avoid power issues, all interactions were led by an experienced teacher and qualitative researcher with no connection to the Graduate Teaching Assistants or the training session.

Ethical approval was granted by the College’s Research Ethics Committee. Graduate Teaching Assistant participation was entirely voluntary, and all participants were given the Right to Withdraw from the research at any time. Graduate Teaching Assistants were assigned pseudonyms to ensure anonymity. All the data, including audio recordings and

transcripts, were anonymised and held in accordance with the latest Imperial College London data protection regulations.

In the 60-minute focus group interviews and follow-up interviews, the moderator explained his role to establish an atmosphere of trust and rapport. He then asked predetermined, semi-structured interview questions about their experience. All interviews were recorded and transcribed to level three verbatim. Data were coded using the qualitative data analysis software Quirkos and then grouped according to themes, with themes being understood as ‘a pattern of shared meaning, organised around a core concept or idea’ (Braun et al., 2018, p. 845). We selected thematic analysis as a more accessible, flexible form of analysis than other qualitative approaches, allowing us to create a rich and detailed account of the data by examining participant perspectives in ways that can lead to fresh insights (Braun & Clarke, 2006; King, 2004).

The Graduate Teaching Assistants’ Perspective

Thematic analysis revealed varying perspectives which we grouped into three key areas: engagement, learning from and with others, and communication. Whilst our initial goal had been to gain the Graduate Teaching Assistants’ perspective on this transition online, it became apparent that they had not only reflected on their experience as student participants in the session but also evaluated it from the perspective of themselves as online teachers. The discussion of our findings therefore incorporates both to share the richness of their reflections.

Engagement

Some Graduate Teaching Assistants saw the small-group collaborative work as an important step in processing and consolidating what was learnt from the flipped input. One observed that the private channel discussion evened the playing field by giving students who hadn’t fully understood the input the opportunity to learn from their peers, and that the more relaxed, collegial environment led to more effective learning. In other words, it lowered their affective filters (Krashen, 1985). This also

suggests that, to some extent, the Graduate Teaching Assistants understood the need to develop social bonds in online interaction and unite around a common goal (Garrison et al., 1999):

These people who have actually grasped it faster (.) they act like (.) as a chain reaction to transfer this information to other people as well (.) because you're actually leaving them to discuss between them (.) in a much more relaxed scenario. (Participant 1)

Optimal group size was also seen as important for promoting engagement, with one participant noting the balance between wanting multiple perspectives on the one hand but needing to ensure there is enough 'space' for each group member to participate equally on the other. In line with Ruthotto et al.'s (2020) finding that larger group sizes led to lesser engagement in online discussion groups, this participant felt that smaller groups mean participants have a sense of duty to participate. However, she also emphasised the need for at least three participants per group to ensure that there can still be a 'majority' viewpoint in the case of disagreements.

The Graduate Teaching Assistants noted that engagement varied from person to person, and they were acutely aware that this was largely personality-driven and not entirely a result of the shift online. This observation is in line with Linvill's (2014) study that individual traits impact student motivation and engagement online relative to their peers. However, it was also observed that the modulation and moderation required in online interactions meant that group members had a more equal opportunity to contribute than when face-to-face. One Graduate Teaching Assistant highlighted that a more structured interaction allowed more balanced turn-taking:

Now we have to essentially structure our speaking manner [...] and then this way we're giving more opportunities for people to be heard (.) rather than (.) you know just the more confident one just picking up and taking this. (Participant 1)

Hammond (2010) discusses how different students perceive the affordances of the online environment differently, which can sometimes lead

to some students engaging more than others. Thus, for some Graduate Teaching Assistants, the online environment seemed to reinforce individuals' natural tendencies, leading to uneven levels of engagement in our session and in their own teaching. Specifically, some felt that for students who are naturally reticent or fear scrutiny, affordances such as muting and turning off the camera in the online environment help them to draw even further into the background.

Graduate Teaching Assistants also noted that distractions in the home environment may be another reason why some students are reluctant to participate, as has been empirically observed elsewhere (e.g. Biwer et al., 2021; Son et al., 2020). One participant stated that knowing which students had a distracting home environment helped him to be more understanding and respond more flexibly. At the same time, highlighting the various means of engaging in the online environment (e.g. camera on or off, in the chat or via microphone) can encourage group members to participate in ways that work for them personally.

Learning from and with Others

Two participants noted the distinct but complementary roles played by the instructors and their peers in the learning process. Whilst tutors are responsible for making class content relevant and meaningful, this burden is shared by the students themselves and what they bring with them (Linville, 2014). Thus, whilst the Graduate Teaching Assistants saw the instructors' role as sharing knowledge to develop understanding, they saw their peers' role as modelling how to apply that understanding in their marking:

Someone gives you the theory and someone gives you the practice (.) so I guess the teachers [...] gives you the theory [...] but then your peers will give you like how they do it the way they approach it (.) so I think it's quite balanced in the sense that you need both of them to deliver good feedback.
(Participant 3)

The data show that during the session, knowledge was 'co-created and shared among peers, not owned by one particular learner after obtaining it from the course materials or instructor' (Brindley et al., 2009, p. 3).

The use of OneNote facilitated collaborative learning, with participants noting that seeing how other Graduate Teaching Assistants approached a student's text in the OneNote app provided valuable learning opportunities. The Graduate Teaching Assistants appreciated learning from each other and valued all levels of experience, both novice and more expert, as well as the scientific knowledge different peers brought into the group that helped them with the activity. For example, one Graduate Teaching Assistant was the only chemist in her group and stated that not only was she able to give her perspective on effective writing for chemistry, but she was also able to appreciate the perspectives of students from other backgrounds. Importantly, the group was able to discuss how scientific knowledge is applied as best practice in different disciplines, which is vital when constructing knowledge regardless of the discipline in which it is learnt.

However, this rich experience was not shared throughout the whole cohort as we had decided to set up the groups randomly. One Graduate Teaching Assistant expressed a desire to hear from other Graduate Teaching Assistants with more experience, as there were only novice Graduate Teaching Assistants in his group. He felt there was only so much value in discussing the student texts without a more experienced voice in the room to give some authority. In addition, this Graduate Teaching Assistant was keen for us to provide model answers, probably because of this lack of access to others' experience and expertise:

The collective knowledge if you like of the group is only so far (.) and although we can all make those statements of oh this can be improved here and this can be improved there it's not the same as actually assessing for a level [...] and it would be nice from a GTA's perspective not to have to wonder oh am I marking too harshly or am I marking too softly [...] we could have what a model assessor would give this student (.) and that would give us some instant feedback on where our marking is (.) and how it's going. (Participant 4)

This finding highlights the importance of ensuring groups are mixed according to experience, and that Graduate Teaching Assistants know to call on us so that they are scaffolded and working within their ZPD.

Communication

One key finding was that interactions need to be more carefully managed online as this directly impacts participants' ability to work together. One participant observed that online interaction has to be modulated to ensure comprehensibility whilst there is more freedom to change the speed of speech face-to-face. It was also clear that some students felt the need to take on the responsibility of creating the group dynamic online, with some highlighting the challenges of engaging others, engaging with others and determining levels of engagement when more reluctant participants can disappear into the background:

For me personally I found it quite difficult to engage people in actual fact to get the conversation brewing especially when for that session where you're reading [...] and assessing. (Participant 4)

It is difficult to control that everyone is participating like evenly (.) which is also something that we need to highlight as GTAs and like (.) the first thing that has to come to our minds is let's make everyone participate which is what I try to actively do. (Participant 3)

Participant 1 also felt the online environment didn't allow for natural turn-taking, meaning communication had to be formally managed and more consciously articulated. He shared how he took on the role of 'chairperson' to avoid people talking on top of each other and ensure all participants had an equal opportunity to speak. It was similarly observed that adding into the talk or interposing comments which are key aspects of collaborative work becomes more difficult online. This was found to be a key constraint of the mute option, as the extra time it takes to unmute often meant the discussion had already moved on by the time the participant was able to talk.

However, it is important to note here that while the Graduate Teaching Assistants found communication in the online environment less spontaneous and organic, when the Graduate Teaching Assistants were interviewed they had been working remotely only for a matter of months. As Hammond (2010) notes, 'the perception of technologies needs to be

understood through past use of similar technologies' (p. 211). As these participants become more familiar with communicating in the online environment, it is likely that they will find ways to overcome its limitations and interact in ways that feel more natural to them.

Reflections on Long-term Impacts

We acknowledge that this study represents the perspectives of a small group of Graduate Teaching Assistants on a set number of online sessions in one academic department. Our findings cannot therefore be seen as being statistically generalisable to other Graduate Teaching Assistants because of the context-dependent nature of the data collection and analysis. The reader should instead view our findings as transferable (Braun & Clarke, 2013) to determine how they might relate and apply to other comparable contexts (Denscombe, 2010).

On the basis of these Graduate Teaching Assistant perspectives, we felt our adoption of a sociocultural approach largely worked. The functionality of Microsoft Teams and OneNote enabled us to flip the teacher-led input, freeing up time for students to discuss their ideas in depth. This led to enhanced interactions and potentially a greater learning experience. Small-group work in Teams channels allowed all Graduate Teaching Assistants to function more autonomously and enter their ZPD, with experts supporting and guiding the novices as they worked on the tasks, cooperating and collaborating to reach a consensus. We also observed that it took time for some students to discover the affordances of the online environment. As Hammond states, 'an affordance is an emergent property of an object. The affordance is there, it has always been there, but it needs to be perceived to be realised' (2010, p. 206). For this session and these participants, we take this as explicitly highlighting the affordances of Microsoft Teams and OneNote for collaborative group work to ensure all group members can participate equally. This is particularly important given the time constraints of the session and the fact that these tools may have been new to participants.

Boulton (2019) also emphasises the importance of recognising cultural differences when using technologies in higher education. Students from

different backgrounds are more likely to have had different experiences of using technology in learning, which, if not recognised, could lead to ‘marginalising rather than empowering already marginalised groups’ (Caruana & Spurling, 2007, p. 73, as cited in Boulton, 2019). Given the culturally diverse make-up of the Graduate Teaching Assistant cohort, we acknowledge we must remain mindful of this factor, as students who have been at our institution for longer become more competent in their use of learning technologies.

The case study focus groups and interviews were intended to give these engineering students a rare opportunity to spend dedicated time reflecting on their own learning. However, they also serendipitously opened up a chance for the Graduate Teaching Assistants to reflect on their own teaching practice, the learning of others, and the affordances and challenges of teaching and learning online. The Graduate Teaching Assistants showed they understood the need to negotiate the student–teacher relationship (Linville, 2014) and for the expert to scaffold the novice, the need to consider the many variables that may impact on an individual’s engagement in a group online task and how to encourage others’ participation. Such findings lend weight to Herrmann et al.’s (2020) assertion that students are adept at critically evaluating the advantages and disadvantages of using technologies in teaching and learning. Moreover, whilst the focus of the session had been on effective written communication, the data revealed that the Graduate Teaching Assistants were aware of, and sensitive to, the various contextual factors in spoken communication.

For us, this experience has made us realise that agility in the online environment should not just be limited to challenging times. While our initial online learning design could be classed as ‘emergency remote teaching’ (Hodges et al., 2020), we have made minor adjustments and improvements with each iteration, and the session is now better planned and quality-assured than the initial emergency one. This also means that post-lockdown we will be able to incorporate the affordances we identified in our online provision into our standard provision.

In other words, whatever the ‘new normal’ may be, we plan to continue using Microsoft Teams collaborative software to enhance engagement. This may entail incorporating a blended approach and keeping the flipped aspect by providing information on video so that face-to-face

time, whether online or in a classroom, is utilised to maximise interaction and active learning. Groups of three students which mix new and experienced Graduate Teaching Assistants should facilitate more balanced cognitive development across the cohort. The success of the focus groups and interviews opens up new opportunities for reflection within the session, particularly reflection on the relationship between context and communication, but also more broadly in the Graduate Teaching Assistant training of these engineering students.

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References

- BALEAP. (2008). *Competency framework for teachers of English for academic purposes*. [Online] <https://www.baleap.org/wp-content/uploads/2016/04/teapcompetency-framework.pdf>
- Biwer, F., Wiradhany, W., Oude Egbrink, M., Hospers, H., Wasenitz, S., Jansen, W., & de Bruin, A. (2021). Changes and adaptations: How university students self-regulate their online learning during the COVID-19 pandemic. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.642593>
- Boulton, H. (2019). Crossing boundaries: The affordances of new technologies in supporting a collaborative learning environment for doctoral students learning transnationally. *Technology, Pedagogy and Education, 28*(3), 255–267. <https://doi.org/10.1080/1475939X.2018.1559761>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/11478088706qp063oa>
- Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage. <https://journals.sagepub.com/doi/10.1177/0959353515614115>
- Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2018). Thematic analysis. In P. Liamputtong (Ed.), *Handbook of research methods in health social sciences* (pp. 843–860). Springer. https://doi.org/10.1007/978-981-10-2779-6_103-1
- Brindley, J. E., Blaschke, L. M., & Walti, C. (2009). Creating effective collaborative learning groups in an online environment. *The International Review of*

- Research in Open and Distance Learning*, 10(3), 1–18. <https://doi.org/10.19173/irrodl.v10i3.675>
- Caruana, V., & Spurling, N. (2007). *The Internationalisation of UK Higher Education: A Review of Selected Material*. <https://www.heacademy.ac.uk/our-work/learning/international>
- Denscombe, M. (2010). *Good research guide: For small-scale social research projects*. McGraw-Hill Education. https://www.academia.edu/2240154/The_Good_Research_Guide_5th_edition
- Gallien, T., & Oomen-Early, J. (2008). Personalized versus collective instructor feedback in the online classroom: Does type of feedback affect student satisfaction, academic performance and perceived connectedness with the instructor? *Int. J. eLearn.*, 7, 463–476.
- Gardner, G. E., & Jones, M. G. (2011). Pedagogical preparation of the science graduate teaching assistant: Challenges and implications. *Science Educator*, 20(2), 31–41. <https://files.eric.ed.gov/fulltext/EJ960634.pdf>
- Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
- Hall, A. (2007). Vygotsky goes online: Learning design from a socio-cultural perspective. In *Learning and socio-Theory: Exploring modern Vygotskian perspectives international workshop 2007*, 1(1), 94–107. <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1005&context=llrg>
- Hammond, M. (2010). What is an affordance and can it help us understand the use of ICT in education? *Education and Information Technologies*, 15(3), 205–217. <https://doi.org/10.1007/s10639-009-9106-z>
- Herrmann, K. J., Lindvig, K., & Aagaard, J. (2020). Curating the use of digital media in higher education: A case study. *Journal of Further and Higher Education*, 1–12. <https://doi.org/10.1080/0309877X.2020.1770205>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). *The difference between emergency remote teaching and online learning*. EducauseReview. 32 <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell & G. Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp. 257–270). Sage. <https://doi.org/10.4135/9781446280119.n21>
- Krashen, S.D., (1985). *The Input Hypothesis: Issues and Implications*. Longman. <https://doi.org/10.2307/414800>.

- Linville, D. (2014). Student interest and engagement in the classroom: Relationships with student personality and developmental variables. *Southern Communication Journal*, 79(3), 201–214. <https://doi.org/10.1080/1041794X.2014.884156>
- Luft, J. A., Kurdziel, J. P., Roehrig, G. H., & Turner, J. (2004). Growing a garden without water: Graduate teaching assistants in introductory science laboratories at a doctoral/research university. *Journal of Research in Science Teaching*, 41(3), 211–233. <https://doi.org/10.1002/tea.20004>
- Mitchell, L. M. (2021). Creating safe spaces for critical class dialogue and reflection. *Covid-19: Interdisciplinary Explorations of Impacts on Higher Education*, 75. <https://doi.org/10.52779/9781991201195/05>
- Palloff, R. M., & Pratt, K. (2005). Learning online: A collaborative approach. In *Proceedings of the annual conference on distance teaching and learning*. University of Wisconsin-Madison (pp. 279–282).
- Plante, K., Asselin, M.E. (2014) Best practices for creating social presence and caring behaviors online. *Nursing Education Perspectives*, 35, 219–223. doi:<https://doi.org/10.5480/13-1094.1>.
- Ruthotto, I., Kreth, Q., Stevens, J., Trively, C., & Melkers, J. (2020). Lurking and participation in the virtual classroom: The effects of gender, race, and age among graduate students in computer science. *Computers & Education*, 151, 103854. <https://doi.org/10.1016/j.compedu.2020.103854>
- Silva, M. (2018) Engineering undergraduate students' perception of feedback. In *Proceedings of the international research conference in Humanities and Social Sciences (IRCHSS)*. University of Sri Jayawardenepura, 145. http://fhss.sjp.ac.lk/wp-content/uploads/2021/05/proceedings_ircchss2018-Final-19.12.2018.pdf
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), e21279. <https://doi.org/10.2196/21279>
- Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education*, 15. <https://doi.org/10.28945/3502>
- Vesisenaho, M., Valtonen, T., Kukkonen, J., Havu-Nuutinen, S., Hartikainen, A., & Karkkainen, S. (2010). Blended learning with everyday technologies to activate students' collaborative learning. *Science education international*, 21(4), 272–283. <https://files.eric.ed.gov/fulltext/EJ907048.pdf>
- Vygotsky, L. (1978) *Mind in society: The development of higher psychological processes*. Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>



22

Educator Reflection on Online Delivery of Professional Development to Precarious Academic Staff

Lauren Woodlands and Melinda Laundon

Introduction

Teaching in Higher Education

Within higher education, staff members on short-term, precarious employment contracts make a significant contribution to curriculum delivery, as universities are heavily dependent on these staff for frontline teaching (Percy et al., 2008; May et al., 2013). These sessional or casual staff are classed as individuals without a permanent employment contract who work in a range of learning and teaching roles such as lecturers, tutors and demonstrators. This type of employment practice is common not only within Australian higher education institutions but also across Europe and the United States, as temporary employment arrangements for teaching staff reflect a rise in student demand and lack of investment in long-term teacher positions (Crimmins et al., 2017). It is estimated

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that up to 80% of undergraduate courses are taught by academics who are subject to precarious work arrangements (Klopper & Power, 2014).

Despite institutional reliance on these staff, many of these educators receive little or no professional development in learning and teaching (Heffernan, 2018). For example, research into practices in universities in the United Kingdom and Australia found that casual staff were often left out of formalised development programmes and were thrust into teaching roles with little to no preparation or awareness of the complex skill set required for professional practice (Hitch et al., 2018). Others have recognised that quality professional development should be available to staff under precarious employment arrangements, as these educators are responsible for the majority of teaching and therefore have a significant impact on the quality of the student learning experience (Hamilton, 2017; Harvey, 2017).

UK Professional Standards Framework

Quality professional development programmes need to capture the nuances of practice required for staff to provide effective learning and teaching. Aligning professional development to the UK Professional Standards Framework (UKPSF) (The Higher Education Academy, 2011) is one method of allowing educators to benchmark their learning requirements and gain awareness of the areas of practice they need to focus on. The UKPSF is a set of internationally benchmarked standards for learning and teaching professionals within higher education. The standards can be used as a rubric of practice through which to self-assess teaching effectiveness (Woodlands, 2021) and can also underpin reflection and enhancement of teaching practice (Ambler et al., 2020). The standards allow educators to reflect on their practice in areas of activity, core knowledge and professional values and, if desired, benchmark their practice to gain recognition via Fellowship of the Higher Education Academy. The UKPSF provides an inclusive framework for various types of higher education staff to benchmark their learning and teaching activities, knowledge and values. The wide use of the PSF in the UK in particular has also

prompted research into the specific professional development needs of precariously employed academics (Bradley, 2008).

Background

Academic Development Support at QUT

Queensland University of Technology (QUT) is an Australian higher education institution, with over 50,000 students and more than 2500 academic staff. While the proportion of academic staff in fixed-term, casual or permanent roles is not publicly reported, the institution's staff profile reflects employment trends from across the sector in that a significant proportion of academic staff are subject to precarious employment arrangements. Within QUT, these staff work across five faculties to deliver lectures, workshops, tutorials and practical demonstrations to students as well as provide marking and feedback to both undergraduate and postgraduate learners.

To enable staff development, the central learning and teaching unit provides workshops, seminars and training on learning and teaching. In 2019, an extensive review of professional development support and provision was conducted in consultation with university stakeholders. This review provided the foundation for a proposed redesign of professional development that would best serve the needs of the contemporary university workforce. The proposed redesign and development included a foundational learning programme coordinated as part of a blended learning framework that aligned with recent academic development literature to support the need for development provision that is designed in a bespoke and responsive manner (Hott & Tietjen-Smith, 2018). While the professional development programme is aimed at all learning and teaching staff in the university, a core audience is staff on precarious employment contracts. These staff were encouraged to prioritise professional development through an attendance allowance for completing eligible modules.

The new suite of four core foundational learning modules, to be implemented at the beginning of 2020, was designed to support staff new to teaching or staff interested in reviewing core concepts in effective educational practice. These foundational learning modules are aligned with the first four areas of activity from the UK Professional Standards Framework and are titled:

1. Approaches to Planning and Designing Learning
2. Principles of Teaching and Supporting learning
3. Effective Assessment and Feedback
4. Creating Effective Learning Environments

The strategy to support professional development in learning and teaching was shaped by several core principles including a digital-first approach to enable participants to begin their learning on demand. This was intended to allow staff to access training and development in a flexible and timely manner, as educators often access professional development when a specific skill or information is required (Vaill & Testori, 2012). Each module includes a self-directed online learning component along with a facilitated workshop with peers.

Impact of COVID-19

At the beginning of 2020, the first semester of teaching at QUT was disrupted by an Australia-wide lockdown response to mitigate the public health risks associated with the COVID-19 pandemic. This direction resulted in a mandate that all learning and teaching delivery at the university was to be provided fully online. QUT provided a one-week pause on teaching activities to support staff with time to transition their programmes to the new mode of delivery. For many educators, this shift was their first experience of online teaching, with many educators also having no experience as an online learner or facilitator.

This shift in delivery to learners also meant that the new professional development provision required the same rapid transformation. For the core academic development team in the central learning and teaching

unit, the university-wide change in delivery became an opportunity to not only teach core teaching skills but also model effective online pedagogy. The need to change the professional development to meet the needs of participants meant that module coordinators needed to quickly transition from a digital-first to online-only provision. This included explicit signposting in asynchronous content and associated facilitated webinars. The foundational modules were structured as a three-hour learning load of self-directed content on the Learning Management System Blackboard, and an associated three-hour facilitated webinar was conducted on the web conferencing platform Zoom. Zoom was selected as it enabled a wide range of participant engagement functionality and was supported through an institutional licence.

Research Design

In this case study, critical reflection is used to capture key learnings on the transition to fully online and integration of online learning pedagogy into the modules. The participants in this research were academic development lecturers in the central learning and teaching unit. They are responsible for designing and delivering professional development in learning and teaching for all institutional staff in learning and teaching roles. The four coordinators of the foundational learning modules were invited to reflect on their experience of transforming professional development to support precarious academic staff during the teaching transition due to COVID-19.

Reflective Practice Using the UKPSF

This research seeks to capture and articulate the lived experience and personal perspectives of module coordinators in relation to how rapid curriculum changes impact upon pedagogical teaching decision-making. This is achieved through utilising critical reflection (Brookfield, 1995), which is recognised as an important part of practice and evaluation for higher education teachers and a way to provide critical insight into

nuances of practice (Harvey & Vlachopoulos, 2020). This research employs auto-ethnography as a tool to critically reflect on the relationship between theory and practice. The two authors of this research have adopted the role of participant-observer (Davies, 2008) as both researchers and module coordinators. Auto-ethnographic research provides a valid lens to surface ‘the intersubjectivity between researchers and their research contexts’ (Pink, 2007, p.23).

All four module coordinators who participated were senior fellows of the Higher Education Academy. Their status as senior fellows means that all participants are familiar with the UKPSF as a reflective tool, having used the standards to undertake structured reflection on their own practice and having mentored other educators to use the UKPSF to reflect on their teaching and learning knowledge, experiences and values.

Reflective Questions

The four module coordinators were asked to provide written reflections on their experience of transitioning the professional development programme using the following questions as reflective prompts. Each question was aligned with relevant dimensions of the UKPSF.

- (a) How did you design and plan the learning materials in a way that supported the needs of a diverse cohort?
- (b) What were you mindful of in your approach to teaching and supporting learning in an online environment?
- (c) What feedback practices did you incorporate based on how participants learn?
- (d) What evidence-informed approaches did you use to create an effective learning environment?
- (e) What methods did you use to evaluate the effectiveness of your approach during a rapid transformation of design and delivery?
- (f) What have you learned about teaching online that could help other educators in their professional practice?

Each participant provided a written reflection, with reflections ranging between 704 and 1248 words in length.

Results and Discussion

There were three key themes that emerged from the module coordinators' reflections on their experiences transitioning the professional development programme to fully online mode. These were the need for explicit scaffolding and modelling of active learning for online contexts; purposeful design that considered how online learners encounter and learn content; and an awareness of the diversity in knowledge and experience of module participants.

Scaffolding Online Learning and Modelling Active Learning

Module coordinators agreed that explicit justification and explanation of techniques and design were important factors in the redesign of professional development. This is supported by Crimmins et al.'s (2017) research where precariously employed academics suggested they needed demonstration of specific pedagogical strategies for instructing learners. Module coordinators identified a number of active learning opportunities they created for participants, including one coordinator who reflected on the importance of including 'a range of methods for participants to contribute—this included verbal discussions, responses in the chat, and polling'. This provided participants with an opportunity to see engagement in action, rather than simply being told it would be useful to use it in their own online teaching. All of the module coordinators noted that effective development includes not just presenting a range of tools or techniques, but also unpacking the reasoning for including these strategies with learners. Since technological competency and digital skills have been identified by academic staff as a developmental need (Klopper & Power, 2014), module coordinators explored ways they could model good practice and increase their participants' confidence:

There were a lot of what I call ‘meta notes’ I included. For instance, instead of just putting up a Padlet [an online collaboration technology] and asking people to interact, I also explained why I was doing it with instructional text like ‘using a Padlet in your online site will give your learners a way to interact with each other and create a space to respond to prompts you provide.’ I wanted tutors to feel like they weren’t just randomly using technology to work with students, but choosing tools purposefully.

I tried to incorporate modelling of best practice delivery into the workshops. This meant that attendees were able to learn not just about the content I was delivering, but also the facilitation methods that were appropriate for the online environment.

I noticed many times that people would ask questions about the techniques I was using in teaching rather than the content itself. For example, I had a countdown timer animation for breaks and people regularly commented on how useful that was and said they wanted to use it themselves.

Modelled demonstrations of classroom practice such as these are essential to contributing to academics’ awareness of the range of teaching skills and pedagogical practices required for effective student engagement (Ambler et al., 2020). Module coordinators also recognised the opportunity to shift their participants’ thinking from how to facilitate effective in-person activities to what was needed to facilitate online engagement:

I previously had an activity that looked at what strategies educators can employ to encourage students to engage in active learning. This relied on looking at the outcomes of a research study that was done in a face-to-face context. I added on an extra component where I asked people to think about how these strategies could be translated to the online environment which was a timely tweak.

The reflections aligned with previous studies of capacity-building for teaching online, which have found that participants benefit from experiencing learning from the perspective of their own learners, particularly if they are also being encouraged to reflect on pedagogy at the same time (Cleary et al., 2017).

Purposeful Design

The original design of the suite of professional development was a digital-first strategy to enable participants to access learning on demand. However, this strategy did not explicitly include the intention of preparing participants to be online educators during a time of rapid transformation and change for both students and staff. Since professional development should reflect the situational needs of educator circumstances (Hitch et al., 2018), one core advantage of the sudden shift to online was the shared training needs of all educators regardless of discipline. Module coordinators reflected on the challenge of how they designed content for orienting learners to how to facilitate online learning.

I had to be really mindful of not just seeing the [learning management system] site for my module as a repository for all the information I wanted people to be aware of. Otherwise, it just becomes like a long reading list, which isn't going to help anyone learn or apply it to their context.

Obviously, there are design elements that underpin [my module redesign], such as changing learning materials to be much more explicit in the expectations and instructions, and including opportunities to orientate people to the features of the platform you're using (in this case Zoom). Also I needed to adjust the materials themselves to ensure I was using activities that are possible (and well-suited) to do online, including thinking about the strategies that can mitigate against technology challenges.

Reflections also included suggestions in the future thinking of designing and planning learning for educators specifically needing development in online learning facilitation.

Centre purpose in all design decisions that you make—think about whether what you want to deliver is better suited to being delivered asynchronously such as video, or synchronously such as via a Zoom workshop. There needs to be some benefit for students in terms of designing for that live environment and taking advantage of interaction and collaborative opportunities.

I found the most valuable activity was seeking out my own professional development and undertaking some short courses online in a range of higher education teaching topics. That way, I could think about my

experience as a learner and the design features used. I implemented some of what I noticed straight away in my own module such as explicit listing of time duration and the main activity type to situate and pace learning.

The design of online learning should include investigation of best practice online learning platforms. Asynchronous online resources to support precariously employed academics are more effective when they include explicit signposting to unpack the purpose of the pedagogical strategies.

Diverse Learners

The challenge in designing professional development is to cater for diverse knowledge, skills and experience of higher education instruction, subject matter expertise and online learning experience. Module coordinators also considered the particular vulnerabilities faced by casual academics:

When designing and planning the foundational module, I first considered the likely makeup of the cohort of learners. I knew that these modules would be targeted mostly at casual academic staff members on precarious contracts and I thought they would be feeling particularly vulnerable to job losses due to smaller student numbers caused by pandemic-related border closures. I also considered that sessional staff have widely varying length of experience teaching and different amounts of pedagogical knowledge. As QUT had previously offered the vast majority of its courses in face-to-face only format, I expected that few educators would have knowledge of or experience in online learning.

Module coordinators were aware of the dual role of the participant as learner and participant as educator and sought to include ways for participants to consider the application of their learning to practice. One opportunity module coordinators identified was to use digital reflective writing journals as a space to encourage this and a tool to overcome differences in prior experiences. Module participants were provided with prompting questions using the HEA standards framework to reflect on everyday teaching experiences, as this would draw attention to the

nuances of their own teaching journey (Thomson & Trigwell, 2018). Coordinator reflections included the following:

You can capitalise on this tension in the teacher/learner-identity in your approach by directing the participants to think of their own students' online journey. For instance, after a set reading with questions, I'd put a reflection question about the process of reading the journal article and if they found it useful, or what could have prepared them better for the content. This helps educators develop a critical perspective to developing learner experience online.

When they arrived at a reflective journal section, I set up some key questions about the material and asked them to apply what they had read about or watched back to their own practice. This is a really important skill for learners to develop.

The asynchronous online component of the module which was self-directed relied largely on reflection. Here educators were encouraged to think about how theories and concepts related to their own context.

A community of practice approach can be used to develop educator capacity by normalising discussion of learning and teaching challenges. A key principle of modelling online best practice was the deliberate inclusion of informal conversations (Thomson & Trigwell, 2018) and peer learning within webinars to discuss and refine educator teaching practice.

In workshops, educators were able to get feedback from multiple places—myself as the instructor, their peers, and internal reflection. I drew upon mostly the first two modes because this is what synchronous learning is able to take advantage of—collaborative and interactive learning where learners can get immediate feedback on their thinking.

A challenge in providing teaching instruction to diverse learners is the desire for staff to receive discipline-specific training (Hott & Tietjen-Smith, 2018) while also acknowledging the diverse foundational skill set required for effective tertiary teaching (Klopper & Power, 2014). Given that staff from different discipline areas access the same professional development, module coordinators were acutely aware of the importance of providing development that would translate across multiple contexts.

One reflection included, 'I drew upon strategies that are applicable to a range of discipline areas. For example, facilitating whole group discussions, using small group activities, and using polling [online interaction tool] to gauge progress'. Furthermore, the nature of precarious employment by many university teaching staff was also taken into consideration with module design and delivery. Module coordinators expressed a desire to give teaching staff 'a professional edge' by looking for opportunities to 'get educators thinking about what they can do with their subject matter knowledge as dynamic, engaging teachers'. One coordinator reflected:

In my teaching and design of the module, I was cognisant of the uncertainties facing casual academic staff, particularly due to new budget constraints meaning there was less work than usual available. I knew many learners were participating not only to build their skills but to also build their future employability as academics.

Having a direct link between module content and the UKPSF placed effective practice at the forefront of learning. This deliberate signposting of reflective practice as a tool for professional learning helps to develop the awareness of professional identity and skill set of precariously employed academics.

Conclusions and Recommendations

While we acknowledge the importance of national and institutional context in designing professional development (Reimann et al., 2020), this case study has provided critical insights into the process of quick decisions for developing online professional development programmes for precariously employed academics. The four module coordinators reflected on key learnings from the rapid transition to the online environment. The summarised pedagogical recommendations for educators undertaking similar transitions in the future are grouped under designing and planning, facilitating and evaluating professional development:

Designing and Planning Online Professional Development

- Ensure that your design decisions for training others remain pedagogically driven, not technology driven. There will always be new and innovative learning technologies, but their use isn't justified unless there is a sound pedagogical rationale.
- It's tempting to overcrowd content online and over-provide information. Rather, think more about what you want people to do with what you're providing and how you can allow your learners to achieve learning outcomes.
- Expect your participants to have a range of familiarity and confidence in online learning and include instructions and pedagogical notes that reassure and justify making the design of learning explicit.
- Keep inclusive practices at the forefront of your design. What are the factors impacting your online learners? How have you demonstrated ways to include these learners, such as plain text, captioning, time-management prompts and clear signposting?

Facilitating Online Professional Development

- Model to staff how they need to orient students to technology and make expectations clear.
- Ask staff to normalise feedback conversations with students by disclosing to learners if they are becoming familiar with a particular learning technology and ask for immediate learner feedback.
- Take opportunities to be an online learner and think about how a student perspective can help you to identify changes to what you do.

Evaluation and Reflection on Professional Development

- Model reflective practice by seeking feedback from learners, both during asynchronous and synchronous learning. Explain how reflective

practice helps educators to continually refine and improve their teaching.

- Facilitate the opportunity for your learners to engage in collegial peer dialogues to share their teaching dilemmas and learn from the best practice of their colleagues.
- Encourage your participants to have their learning resources peer-reviewed as they are developed.
- Encourage precarious academics to consider how their engagement with professional development aligned with the UKPSF can give them a holistic perspective of their teaching and learning practice.

References

- Ambler, T., Solomonides, I., Smallridge, A., McCluskey, T., & Hannah, L. (2020). Professional learning for academics teaching first-year undergraduate students. *Professional Development in Education*, 46(5). <https://doi.org/10.1080/19415257.2019.1647272>
- Bradley, S. (2008). Sessional teaching staff and learning, teaching, and assessment: Engaging the marginalised. *Collected Essays on Learning and Teaching*, 1, 47–53. <https://doi.org/10.22329/celt.v1i0.3177>
- Brookfield, S. (1995). *Becoming a critically reflective teacher*. Jossey-Bass.
- Cleary, K., Samarawickrema, G., & Gauci, S. (2017). Us and IT: Capacity-building for blended learning: An intersection between educator, pedagogy, and technology. In H. Partridge, K. Davis, & J. Thomas (Eds.), *Me, us, IT! Proceedings of ASCILITE 2017, the international conference on innovation, practice and research in the use of educational Technologies in Tertiary Education* (pp. 32–36).
- Crimmins, G., Oprescu, F., & Nash, G. (2017). Three pathways to support the professional and career development of casual academics. *International Journal for Academic Development*, 22(2), 144–156. <https://doi.org/10.1080/01360144X.2016.1263962>
- Davies, C. A. (2008). *Reflexive ethnography: A guide to researching selves and others* (2nd ed.). Routledge.
- Hamilton, J. (2017). Academic success and student success: A correlating framework. In *Students, quality, success: Proceedings of the 2nd annual Tertiary Education Quality and Standards Agency (TEQSA) conference* (pp. 187–208).

- Harvey, M. (2017). Quality learning and teaching with sessional staff: Systematising good practice for academic development. *International Journal for Academic Development*, 22(1), 1–6. <https://doi.org/10.1080/1360144X.2017.1266753>
- Harvey, M., & Vlachopoulos, P. (2020). What a difference a day makes: Reflection retreats as academic development in higher education. *Journal of Further and Higher Education*, 44(3), 378–392. <https://doi.org/10.1080/0309877X.2018.1541976>
- Heffernan, T. (2018). Approaches to career development and support for sessional academics in higher education. *International Journal for Academic Development*, 23(4), 312–323. <https://doi.org/10.1080/1360144X.2018.1510406>
- Hitch, D., Mahoney, P., & Macfarlane, S. (2018). Professional development for sessional staff in higher education: A review of current evidence. *Higher Education Research & Development*, 37(2), 285–300. <https://doi.org/10.1080/07294360.2017.1360844>
- Hott, B., & Tietjen-Smith, T. (2018). The professional development needs of tenure track Faculty at a Regional University. *Research in Higher Education Journal*, 35, 1–12.
- Klopper, C., & Power, B. (2014). The casual approach to teacher education: What effect does casualisation have for Australian university teaching? *Australian Journal of Teacher Education*, 39(4), 101–114. <https://doi.org/10.14221/ajte.2014v39n4.1>
- May, R., Strachan, G., & Peetz, D. (2013). Workforce development and renewal in Australian universities and the management of casual academic staff. *Journal of University Teaching & Learning Practice*, 10(3). <http://ro.uow.edu.au/jutlp/vol10/iss3/3>
- Percy, A., Scoufis, M., Parry, S., Goody, A., Hicks, M., Macdonald, I., Martinez, K., Szorenyi-Reischl, N., Ryan, Y., Wills, S., & Sheridan, L. (2008). *The RED report, recognition—Enhancement—Development: The contribution of sessional teachers to higher education*. Australian Learning and Teaching Council.
- Pink, S. (2007). *Doing visual ethnography* (2nd ed.). SAGE.
- Reimann, N., Fabriz, S., & Hansen, M. (2020). The importance of national and institutional context: Implications for research on teaching development programmes. *Journal of Further and Higher Education*, 1–13.
- The Higher Education Academy. (2011). *The UK professional standards framework for teaching and supporting learning in higher education*. The Higher Education Academy. <https://www.heacademy.ac.uk/ukpsf>

- Thomson, K., & Trigwell, K. (2018). The role of informal conversations in developing university teaching? *Studies in Higher Education*, 43(9), 1536–1547.
- Vaill, A., & Testori, P. (2012). Orientation, mentoring and ongoing support: A three-tiered approach to online faculty development. *Journal of asynchronous learning. Networks*, 16(2), 111–119. <https://doi.org/10.24059/olj.v16i2.256>
- Woodlands, L. (2021). Thematic analysis of professional stories using the HEA framework. In G. Hill & A. Rixon (Eds.), *Making sense of stories: An Inquirer's compendium*. Cambridge Scholars Publishing.



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Slaying the Dragons: Formal and Informal Collaborative Approaches to Developing the Online Learning and Teaching Identities Required for Running Courses

Alison Clapp

Introduction

Any move to online learning and teaching requires staff development (Salmon, 2014), and with the COVID-19 pandemic, this transition was of necessity at scale and without staff choice or consideration of staff readiness to teach online (Cutri et al., 2020).

This chapter describes a case study, beginning pre-COVID, as an action research study in the Faculty of Medical Sciences Graduate School at Newcastle University. In the Faculty of Medical Sciences Graduate School, there are several master's programmes taught as entirely online distance learning. The staff tasked with running the modules within these programmes are usually clinicians, other healthcare professionals and research scientists, who may have taught as on-campus lecturers but lack

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any experience of online teaching. They also have very little spare time for staff development training. Action research was a useful methodology for developing a response to this problem. Action research is defined as ‘a form of self-reflective enquiry undertaken by participants in social (including educational) situations in order to improve the rationality and justice of their own social or educational practices, their understanding of these practices, and the situations in which these practices are carried out’ (Kemmis, 2007, p. 168).

Reflecting on the problem of the need for rapid and ‘just-in-time’ training resources for a move to the online teaching, the researcher-practitioner (the author) developed an on-demand short course. Consisting of topics on pedagogy and technology use, it was run by an experienced e-learning lecturer (the researcher-practitioner). Evaluation of this course and subsequent edits completed the action research cycle. With the universal move online due to COVID-19, the pedagogy section was repurposed to run as part of the university’s Learning and Teaching Development Services course for all the university staff. In this chapter, the rationale, development, running and evaluation are described, with a discussion of future uses and approaches which might be continued into the post-COVID world.

In the years prior to the pandemic, support for the development of staff tasked with developing and running modules online was patchy and fragmented in the Faculty of Medical Sciences Graduate School. It was often assumed that staff able to teach present-in-person lectures and seminars would automatically be able to teach online. It was noticeable to the e-learning team in the Faculty of Medical Sciences Graduate School that those faculty who were inexperienced in online teaching often asked them for help just at the time the task in question was due to be carried out, and sometimes the same questions were asked again during annual iterations of the courses. To provide evidence that training was problematic and to develop solutions for staff development, an action research cycle commenced. A collaborative self-ethnography was carried out within the e-learning team. The collaborative self-ethnography involves the pooling of data from several researchers describing their own environment (Alvesson, 2003), in this case that of the e-learning team, with data collated by the e-learning lecturer. The ethnography found that online

pedagogy is to present-in-person faculty the equivalent of the medieval dropping off the edge of the map into the unknown, where ‘there be dragons’. The ethnography recorded that several staff members, inexperienced in teaching online, commented prior to their involvement in online courses, ‘I was dreading this’, also bemoaning their lack of time for staff development (Clapp, 2017). Whilst training and workshops were available, the lack of time to participate was problematic due to their clinical and research workload.

Teaching in an online mode has different characteristics to teaching in present-in-person sessions. Not only do staff require a competency in the technology use, but they also need to understand the differing pedagogy of teaching online. This is thought to be more effective in the constructivist tradition rather than in the transmissive method of traditional face-to-face lecturing (Secore, 2017). Providing activities to enable students to construct their own knowledge is one way of ensuring student engagement in online courses. Many staff find the transition to an online role discomfiting, with what Maggio et al. (2018) describe as ‘identity dissonance’. The unknown world challenges the beliefs staff hold about teaching. This concurs with the ethnography of the e-learning team (Clapp, 2017). Many of the clinicians, healthcare professionals and scientists had never experienced being a student online except from ‘tick box’ types of course associated with good clinical or laboratory practice. It was notable that when these staff members designed course content with both technical staff and the e-learning lecturer within the team, confidence developed extremely quickly. This informed the response to the problem of staff development for online teaching within the action research cycle.

Designing and Running an Online Staff Training Module

Responding to the problem of ‘slaying the dragons’ for the teaching staff, an action research cycle, in which the practitioner reflected on the problem (a lack of knowledge of online teaching), provided a solution (design of a short online module for staff development), which was subsequently

evaluated by participants and slightly edited. The module developed knowledge of online pedagogy and provided practice in the use of the technology. The staff would use the knowledge and skills gained, which are required to teach their own students in the specialist subjects covered by the modules they were taking over or developing for one or other of the online programmes in the Faculty of Medical Sciences Graduate School. The staff development module was to be permanently available, and participation was voluntary but encouraged for new online teachers in the Faculty of Medical Sciences Graduate School. The content was built in a customised content management system which was used in the Faculty of Medical Sciences Graduate School at that time, linked to the virtual learning environment (then, Blackboard). The module was to be run on-demand and was to be tutored by the e-learning lecturer, who developed this resource. The theory behind the suitability of an online course was to provide staff with experiential learning in an online mode as students. The e-learning lecturer, with many years of online teaching experience, tutored the course to encourage collaboration among staff as student participants and facilitate collaboration between 'students' and the tutor, which enable good student engagement in online distance learning. Socially situated learning is highly beneficial (Brown et al., 1989). With these interactions, it was hoped to provide an exemplar of what 'good' online teaching could look like. After peer-review by another staff member with a previous history of online teaching, and subsequent editing of the wording of some topics, the course was released for piloting with staff new to online teaching. Following that first iteration, as part of the action research cycle, evaluation using the experiences of the two pilot staff participants enabled some further content editing. It was then rolled out to all new online teachers in the Faculty of Medical Sciences Graduate School, with the e-learning lecturer (the 'tutor') as module leader running the course on-demand.

Staff as student participants worked their way through the content, which was a mixture of video (some developed by the e-learning lecturer, and others obtained from YouTube), text and reading. These types of resources are commonly found in online distance learning courses (Caplan, 2004, p. 178). The pedagogical section provided knowledge on the community of inquiry model, which is a social approach to learning

and teaching based on Dewey's model (Williams (2017)). This was further developed for online distance learning by Garrison et al. (2000). The model requires sufficient levels of social presence which allows students to feel safe in the online environment; cognitive presence as student critical thought which is communicated to the rest of the community of inquiry; and teaching presence, where the tutor ensures students are engaging in online activities, contributing to discussions, and provides tutor feedback on student work. These elements add to higher-order learning. To carry out this approach, there were activities primarily concerned with developing student and tutor commentary on the online discussion boards, as well as student-developed content on blogs and wikis. These activities involved the 'student' participants planning how they would develop and run their own online courses, reflecting on the differences between the online and the on-campus modes of teaching.

Gilly Salmon's five-stage model (Salmon, 2014) was used as a blueprint for scaffolding student learning. The five stages are accessing the course and motivation; socialisation; exchanging information (here the discussion boards are useful); constructing knowledge; and finally, encouraging student development. The model showed the importance of socialising students, including how to ensure students felt comfortable in the online environments, and making the courses seem 'human' despite their distributed nature. For example, to put the five-stage model into practice, participants were asked to create welcome videos for the students on their courses.

Overall, the aim of the theoretical part of the course was to encourage participants to develop their learning communities, in practical terms creating a learning object (the welcome video) which they could then use in their own courses to save time. They also planned their own course development through the discussion boards, collaborating with other students and the tutor.

Authenticity of course content in the provision of real-world examples is important, guiding the content of this module (Herrington & Herrington, 2007). Discussion boards were available for activities in the topics on pedagogical theory, providing a commonly used example of collaborative learning online as the tutor further engaged participants here, encouraging continuing discussions. The relevance of the tasks is

revealed to the students when using ‘real-world’ activities—in this case, collaboration on discussion boards in solving problems of student engagement (Lister, 2014). Suggestions for running the discussion boards were considered particularly important in the online distance learning courses in the Faculty of Medical Sciences Graduate School, where there was only a small amount of synchronous teaching due to the wide geographical distribution of students in different time zones. Online tutors need to ‘nudge’ students to develop their arguments, rather than reach a conclusion where all discussion ceases. Encouragement needs to be given to those students who ‘lurk’ rather than participate, so tips for handling ‘lurkers’ were given, and activities encouraging participants to consider their response to students enrolled, but not participating, were provided for reflection and future practice. Reflective learning increases depth of knowledge and can be enhanced by collaborative activity (Chang, 2019).

Other topics included theory and practice in the use of technology, with detailed step-by-step guides available. These could be instantly accessed anytime by staff members, considered useful for times such as marking assignments and editing content in the virtual learning environment for future iterations, as well as running the virtual classroom (Adobe Connect, before it was replaced by Zoom). Other areas considered to be useful knowledge for staff were the duties of module leads and the importance of copyright considerations when developing resources.

Evaluation

The module was evaluated as a staff development resource just as COVID-19 became a pandemic. Two staff members who had used the resource were interviewed, one in person and the other via Zoom due to the lockdown. One of them had already been a student on an online master’s course, as well as receiving a postgraduate certificate in education online. Despite this, she said her confidence in knowledge of online pedagogy was not high, although her knowledge of the technology was good and she regarded herself as ‘being quite teckkie’. She found the theories of online learning, and especially the tips on using discussion boards for maximum student engagement, were both new and useful, improving

her expertise. The only change she would have liked is to have taken the course earlier to allow her to consider the changes she wanted to make to the module she inherited sooner. She thought being an online student would engender empathy with her students, and that it was beneficial having a resource accessible all the time, as well as being able to ask an experienced staff member for help (the e-learning lecturer).

The other staff member had no experience as an online student before this course, although she had participated in a massive open online course (UMOOC). When taking over her module, she said she was nervous about the lack of visible body language which she relied on in her present-in-person practical training sessions to gauge how well the students were understanding the content. On completing the course, she said the content on communities of inquiry was key for her, as well as discussion board tips. She thought that the general content could not be improved, but timing of when the course was introduced was important, as well as being more explicit about what the 'student' would get from it. She said that she was pleased to be able to access the course continuously and that the knowledge had made her feel more responsive and better able to engage her present-in-person students as well as online students. However, she would have preferred a larger cohort to complete the module with; this was not possible because of the limited numbers and different starting times of staff newly appointed as module leaders.

A new video introducing the course was designed in light of the feedback, providing staff with clear expectations of what they would gain from participating. Managing student expectations in the online environment is important to maintain student motivation (Bordeaux & Schoenack, 2016). Whilst the course continued to be available in the Faculty of Medical Sciences Graduate School, at this point it became clear that present-in-person teaching across the university would need to be curtailed in light of the COVID-19 pandemic.

Repurposing the Pedagogic Knowledge for the University's Response to COVID-19

During the COVID-19 pandemic, the majority of universities globally moved their courses online, with a requirement for staff development in online pedagogies increasing (Johnson et al., 2020). This was true of Newcastle University. The pedagogical development section of the on-demand short course was repurposed within a wider course known as 'Flexible Learning 2020', covering alternatives to present-in-person teaching available across the university, with tutors from Learning and Teaching Development Services replying to comments and queries in discussion boards. The aim was to provide staff development to continue an excellent student learning experience within the parameters of teaching during COVID-19.

This course ran similarly to a UMOOC, with the entire staff of the university, as well as postgraduate students involved in teaching, having access. A rota of staff from Learning and Teaching Development Services and the wider university provided interaction with staff commenting or querying points on the discussion boards. The course was built into the virtual learning environment, Canvas, which the university had embraced in the middle of the pandemic. The 'building your learning community' section, repurposed from the pedagogical section of the Faculty of Medical Sciences Graduate School course, was situated near the start of the course. It contained videos and text, as before, with communities of inquiry and Salmon's five-step model prominent. The introduction showed how students could be 'socialised' online and how to retain 'human-ness' by starting classes with a synchronous session and ensuring staff profiles had their pictures with descriptions of where and how they could be contacted, as well as how they would communicate with students. 'How to develop a community of inquiry' made suggestions for using virtual classrooms (online sites such as Zoom or Teams) providing teacher presence and encouraging collaborative working. Activities were designed to help the staff consider how they would transfer their knowledge to their own courses, and discussion boards were set up for responses and 'student' queries. The role of the tutor when teaching online was

considered, including setting tasks and developing collaborative learning. Suggestions for enabling their students to work using analysis and synthesis at the higher end of Bloom's Taxonomy were provided (Gogus, 2012). Students vary in their motivation for activity using discussion boards (Hartnett et al., 2021), so ways of responding to students featured in the resource. Finally, Learning and Teaching Development Services provided guides for using the various technologies (Canvas, Zoom, Teams), which would form the environment of the online learning communities.

Evaluation could have taken the form of assessing engagement on discussion boards; here, it appeared that engagement was lacking due to the paucity of posts. Despite encouragement to use the boards for social learning, participants were more likely to view pages without connecting with others, decreasing learning (Askeroth & Richardson, 2019). Evaluating course impact was difficult at this scale compared to the previous small studies mentioned, with enrolled staff having such varied participation levels. In addition, the course continues to run, with new participants invited to join regularly (new staff and more postgraduates as teaching assistants). Analytics available in Canvas were used to gauge the number of staff participating as well as to case-find staff to provide feedback on 'building a learning community' section via an online survey. At the time of writing, there were approximately 11,800 people enrolled on the entire course, although huge numbers did not actually participate for varying possible reasons: they may have been researchers rather than teachers; they used other sources of staff development training such as the webinars available from the Learning and Teaching Development Services; and they may have been involved in online teaching already. The highest number of whole course views occurred when the course was launched in June 2020, with another peak in mid-September 2020, and viewing held steady over the rest of the period.

Approximately 10% of enrolled staff and postgraduates viewed the 'building a learning community' section, which is higher than the percentage of staff viewing many other sections. Interestingly, this section was viewed by similar numbers to the section on 'alternatives to lectures', suggesting staff are open to developing knowledge of theoretical and practical aspects of teaching online. Using Canvas analytics, staff who

had spent more than two hours viewing the whole course were investigated further to ascertain if they had viewed the 'building a learning community' pages. A selection of these staff (around 33%) were then emailed a link to a survey. There were only four questions: prior experience and knowledge of online teaching, confidence level for teaching online subsequent to participating in 'building a learning community', if they obtained information from elsewhere other than 'building a learning community' and, finally, whether their new knowledge had made a difference to their students.

The response rate to the questionnaire was low (19%), likely reflecting the current workload precluding what might be considered superfluous extra work, responding to surveys. For the question of prior experience and knowledge of online teaching, those who responded described completing the Newcastle University teaching award (compulsory for new staff lacking other teaching qualifications) where online teaching 'was touched upon. Little did we know it would be so useful today!'. Another had used the lecture recording system, available as 'personal capture' (Panopto) to enable students to present to their peers and receive feedback. Overall, the staff did little blended learning and had not taught fully online before. Subsequent to completing 'building a learning community', on a scale of 0–5, where 0 was no confidence in their ability and 5 was a great deal of confidence, overall score was 4, a lot of confidence in the ability to teach online. Staff had used the Learning and Teaching Development Services webinars as well as the online course for their information. There were requests for more videos to be available in 'building a learning community', as well as more exemplars of successful ways of making students comfortable in their online environment. They also requested more idea of the time it will take to develop materials for their students, in the chronically time-deficient academic environment. Beneficial impact for students included greater thought in the development of engaging synchronous sessions and more confidence in developing collaborative activities for the students. It would have been useful to discuss with students how well prepared they felt the staff were in the move online, but it would have been hard to tease out just the use of 'building a learning community' as a pedagogical theory resource.

Ethical Considerations

At each step for evaluation, ethical approval was sought and obtained from the university's preliminary ethics committee. In conducting the ethnography, whilst all the e-learning team under study were well aware of, and participated in, the research, the staff who they interacted with were not. It was decided to ask for permission from those whose comments were used as quotations, which was freely given in writing. Care was taken in how these quotations were used, with anonymity maintained, with thought given to possible consequences of reporting the comments. Ethnographers have to reflect on their own actions to formulate ethical use of the data (Ferdinand et al., 2007). The use of Canvas analytics to determine staff use of 'building a learning community' could be deemed 'spying', and possibly contributed to the lack of response to the survey. The researcher did feel uncomfortable about using analytics, which she would have felt less so had it been to help university students achieve their goals. However, all staff lists remained anonymous to others in the university, following the 'do no harm' principle described by Kitto and Knight (2019).

The Learning from this Case Study

An online course, accessible to all on-demand is a successful means of providing staff development for the transition to online teaching, providing confidence and 'slaying the dragons' of the fear of the unknown. Resources should be available at all times, particularly for guides in use of the technologies required for online learning, as staff do not necessarily work in the hours that advice can be sought. However, rather than solely using the online course as a standalone resource, collaboration with staff who are experts in the field of online education for interactions alongside creates more social learning. This provides staff with an exemplar of online teaching and the ability to translate the experience to their own courses for students.

Working with others who were experts in the field of online education provided the relational agency for the development of a skill set within one group (present-in-person teaching staff) from the expertise of others (the e-learning lecturer prior to COVID-19, and this lecturer plus Learning and Teaching Development Services staff during COVID-19). ‘Partnership practice’ has been described by Hopwood et al. (2016); the practice includes relational expertise where, in this case, the experienced academic worked with those less experienced academics to develop knowledge of the pedagogy of online teaching. These ‘inexperienced’ staff already have some common knowledge of the academic system they work in, of the rules surrounding degree programmes in the university and of how labour is divided between themselves, and they only need to develop an understanding of how to respond in an online environment to complete their knowledge.

It was noticeable that on a small scale pre-COVID, it was easier for the experienced online lecturer to act as informal ‘mentor’ to newer online staff. Inexperienced staff participating in the online module collaborated with each other and the e-learning lecturer as tutor, who could additionally act as a mentor when these students develop and edit their own online modules. The e-learning lecturer designed the module so that it would provide exemplars of online teaching, with the student-staff able to observe, and discuss after reflection, how they would use their knowledge in their courses, following Bandura’s social cognitive theory. Here, agentic action leads to behaviours which are not created by autonomous knowledge development (Bandura, 2001). This was harder to accomplish well in the larger Flexible Learning 2020, which lacked a more personal touch due to the high number of participants, who dispersed without much further communication with their online course tutors. Instead, these participants were subsequently able to work with technology enhanced learning staff from Learning and Teaching Development Services when required.

Activities within the staff development courses were developed to show exemplars of how students could be asked to participate, such as reading and reflecting, visiting websites and commenting, and solving problems. However, staff participating in Flexible Learning 2020 commented that formal exemplars would be useful, so it is necessary to be more explicit as

to the purpose of these when showing exemplars in future. This is now addressed with case studies of where innovations have worked well displayed, although there are many types and methods which can be used to provide good online courses (University of Edinburgh, 2016).

Participating in a staff development course online prior to and during COVID-19 has been a successful experience for many staff. With the addition of an informal mentor/e-learning champion to help staff with their questions and provide advice on what works well, a pathway has been provided to develop the online teaching identity and skills of staff involved in online courses and blended education for the new 'normal' reached when the threat of COVID-19 infection abates. This increase in confidence in pedagogies and use of technology has been reported by other institutions during the pandemic, with some finding their development has been transformative (Zuo & Juve, 2021).

In summary, when considering the practice of developing staff to teach online, we need to ensure time is set aside for staff development, preferably in a timely manner prior to developing online courses/resources. Training should be situated, that is, online, with a variety of materials and activities including videos and synchronous activities to humanise the course. Exemplars and case histories should be provided for staff to see what courses could look like. Mentors should be available, ensuring staff know who they can turn to for help.

References

- Alvesson, M. (2003). Methodology for close up studies—Struggling with closeness and closure. *Higher Education*, 46, 167–193. <https://doi.org/10.1023/A:1024716513774>
- Askeroth, J. H., & Richardson, J. C. (2019). Instructor perceptions of quality learning in MOOCs they teach. *Online Learning*, 23(4), 135–159. <https://doi.org/10.24059/olj.v23i4.2043>
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Bordeaux, R., & Schoenack, L. (2016). Adult student expectations and experiences in an online learning environment. *The Journal of Continuing Higher*

- Education*, 64(3), 152–161. <https://doi.org/10.1080/07377363.2016.1229072>
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42. <https://doi.org/10.3102/0013189X018001032>
- Caplan, D. (2004). The development of online courses. In T. Anderson & A. Elloumi (Eds) *Theory and practice of online learning*. Athabasca University. https://www.aupress.ca/app/uploads/120146_99Z_Anderson_2008-Theory_and_Practice_of_Online_Learning.pdf
- Chang, B. (2019). Reflection in learning. *Online Learning*, 23(1), 95–110. <https://doi.org/10.24059/olj.v23i1.1447>
- Clapp, A. (2017). An e-learning team's life on and offline: A collaborative self-ethnography in postgraduate education development. *The Electronic Journal of e-Learning* 15(1), 33–45. www.ejel.org
- Cutri, R. M., Mena, J., & Whiting, E. F. (2020). Faculty readiness for online crisis teaching: Transitioning to online teaching during the COVID-19 pandemic. *European Journal of Teacher Education*, 43(4), 523–541. <https://doi.org/10.1080/02619768.2020.1815702>
- Ferdinand, J., Pearson, G., Rowe, M., & Worthington, F. (2007). A different kind of ethics in ethnography: Tales from the field. *Ethnography*, 8(4), 519–543. <https://doi.org/10.1177/1466138107083566>
- Garrison, R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment. *The Internet and Higher Education*, 2(2–3), 87–105. <https://doi.org/10.1016/j.sbspro.2011.12.092>
- Gogus, A. (2012). Bloom's taxonomy of learning objectives. In N. M. Seel (Ed.), *Encyclopaedia of the sciences of learning*. Springer. https://doi.org/10.1007/978-1-4419-1428-6_141
- Hartnett, M., St George, A., & Dron, J. (2021) Examining motivation in online distance learning environments: complex, multifaceted, and situation-dependent. *International Review of Research in Open and Distributed Learning*, 12, 6. <http://www.irrodl.org/index.php/irrodl/article/view/1030>
- Herrington, A. J., & Herrington, J. A. (2007). What is an authentic learning environment? In L. A. Tomei (Ed.), *Online and distance learning: Concepts, methodologies, tools, and applications* (pp. 68–77). Information Science Reference. <https://doi.org/10.4018/978-1-59904-935-9>
- Hopwood, N., Day, C., & Edwards, A. (2016). Partnership practice as collaborative knowledge work: Overcoming common dilemmas through an

- augmented view of professional expertise. *Journal of Children's Services*, 11(2), 111–123. <https://doi.org/10.1108/jcs-08-2015-0027>
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning*, 24(2), 6–21. <https://doi.org/10.24059/olj.v24i2.2285>
- Kemmis, S. (2007). Action research. In M. Hammersley (Ed.), *Educational research and evidence-based practice*. SAGE publications.
- Kitto, K., & Knight, S. (2019). Practical ethics for building learning analytics. *British Journal of Education Technology*, 50(6), 2855–2870. <https://doi.org/10.1111/bjet.12868>
- Lister, M. (2014). Trends in the design of E-learning and online learning. *MERLOT Journal of Online Learning and Teaching*, 10(4), 671–681. https://jolt.merlot.org/vol10no4/Lister_1214.pdf
- Maggio, L. A., Daley, B. J., Pratt, D. D., & Torre, D. M. (2018). Honouring thyself in the transition to online teaching. *Academic Medicine*, 93, 1129–1134. <https://doi.org/10.1097/acm.0000000000002285>
- Salmon, G. (2014). Transforming future teaching through 'Carpe Diem' learning design. *Education Science*, 4, 52–63. <https://doi.org/10.3390/educsci4010052>
- Secore, S. (2017). Social constructivism in online learning: Andragogical influence and the effectual educator. *e-mentor*, 3(70), s. 4–9. <https://doi.org/10.15219/em70.1300>
- University of Edinburgh. (2016). *Digital education: Manifesto for teaching online*. <https://blogs.ed.ac.uk/manifestoteachingonline/the-text/>
- Williams, M. K. (2017). Dewey in the 21st century. *Journal of Inquiry & Action in Education*, 9(1), 91–103.
- Zuo, L., & Juve, A. M. (2021). Transitioning to a new era: Future directions for staff development during COVID-19. *Medical Education*, 55(1), 104–107. <https://doi.org/10.1111/medu.14387>



24

Pivoting Professional Recognition—A Community Approach

Kate Cuthbert and Laura Stinson

Introduction

Professional development within higher education has morphed many times. Chasing down the right ingredients and format to bear the fruit of enhanced student outcomes has resulted in a proliferation of credit-bearing programmes, developmental roadmaps and the recent emergence of an apprenticeship in the United Kingdom that establishes an Academic Professional Standard (Institute for Apprenticeships and Technical Education, 2018). Ever-present, though also susceptible to fashion, has been professional recognition awarded as Higher Education Academy Fellowship from engagement with the Higher Education Academy's UK Professional Standards Framework (PSF) (2011). Awarding fellowship across four categories (Associate Fellow, Fellow, Senior Fellow and

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Principal Fellow) is dependent on an individual providing evidence of their practice aligned to the Professional Standards Framework. This framework, hosted by AdvanceHE, recognises engagement across five areas of learning and teaching activity, four professional values and six core knowledge dimensions and is a globally used reference point for professional development in higher education. Nottingham Trent University in the UK is accredited by AdvanceHE to award fellowship, and our team provides support mechanisms for colleagues as they pursue this award. For this evaluation-based case study, we focused on gaining the fellowship award via the professional recognition scheme (a non-credit bearing route which is inclusive in relation to job role or contract). We have evaluated how our pivot to online has reinforced the Higher Education Academy Fellowship community through a range of mechanisms including synchronicity, facilitation and engagement to build a collective experience.

Context and Challenges

Whilst the Professional Standards Framework provides a global benchmark for learning and teaching, when it comes to experiencing fellowship in terms of the process of compiling a claim and the context in which those post-nominals land, it is fair to say there is an element of institutional character (Hibbert & Semler, 2016; Shaw, 2018; Spowart et al., 2019).

This institutional character manifests in several ways, some of which are explicit decisions, and some are tonal and culturally linked. For example, at the micro-level, there are differences in the language and style of guidance documents and resources. This also extends to the fluidity of support and gatekeeping for submission such as enrolment requirements or prerequisites for engagement. All of these have been influenced by the overarching or macro-level context, including the narrative of learning and teaching within university business, the positioning of fellowship in career progression structures, inclusivity of roles engaging with the Professional Standards Framework, organisational location of the fellowship scheme and connections made between fellowship and other strategic scholarly activities (Peat, 2015).

In 2019, we started to redefine the institutional character of the Nottingham Trent University Professional Recognition Scheme prompted by a move into the Centre for Academic Development and Quality and the observation that even with over 1000 colleagues with a fellowship status, there was an absence of people talking about fellowship and their development as an educator.

For academic staff at Nottingham Trent University, contractual requirements for achieving a certain fellowship category are established in institutional policy and linked to progression opportunities. However, this did not represent a fellowship community, nor did it amplify the ethos that professional recognition was more inclusive for everyone contributing to learning and teaching. We set our sights on a more collaborative, community-focused scheme, one which better reflected Nottingham Trent University and the signature pedagogies we championed.

In the latter part of 2019, we established a set of guiding change principles to direct our support interventions using a theory of change approach (Weiss, 1995). These were adapted and built into our strategy as we pivoted to a virtual environment in March 2020 due to COVID-19. The perceived situation in 2019 was that fellowship is experienced as disparate/lonely, is unseen/unheard and is a process rather than a practice. It was not viewed as contributing to making teaching better or seen as a conduit of pedagogical scholarship. As a scheme, we wanted to change these perceptions to bring a sense of belonging to the fellowship experience which was seen as a practice first and visible across the institution. It would be linked to making teaching better and support Nottingham Trent University's teaching and scholarship framework. We also had to consider the impact that a virtual support offer would have on the fellowship experience.

Building a Fellowship Community

Writing for professional recognition can be a lonely experience and, because the outcome is individual, typically solitary (Cuthbert, 2018). Yet as educators, many of us have embraced social pedagogy along with the importance of developing praxis within learning opportunities (Friere, 1970). Wenger et al. (2011) outline the potential benefits of

communities in the context of social learning. These consequences include sharing information, learning from each other's experiences, helping each other with challenges, keeping up with the field and stimulating change. What is striking is the prominence of hidden curriculum, the serendipitous learning that is afforded because the learning topic is happening within a community. Furthermore, this list hints at a more sustained outcome and one that offers new types of development opportunities beyond current engagement.

Within their framework, Wenger et al. (2011) identified five levels of these value assets as a means of evaluating impact and maturity as a community of practice develops. The first four values identified resonated with our ambitions to evaluate not only the methods employed in the pivot to online support but also the power a community-focused fellowship experience had on wider scholarship.

Immediate value: The instant results individuals recognise because of their participation, for example, hearing the different ways colleagues are approaching fellowship writing during the writing workshop.

Potential value: The stored-up knowledge capital colleagues refer to as they return to fellowship writing, for example, returning to fellowship stories.

Applied value: Knowledge capital that translates to an asset beyond the community, for example, developing a fellowship voice to convey impact of practice.

Realised value: The development of new practices after the applied practices, for example, increased participation in scholarly activities beyond the fellowship experience.

There is a steady stream of literature which challenges the longevity of fellowship, with fellowship as a terminus or a means to an end rather than an integrated part of professional growth (Onsman (2009); Stes et al. (2013); Stewart, 2014; Shaw, 2018; Spowart et al., 2019; Van der Sluis, 2021). Our aspiration was to harness community by increasing opportunities for colleagues to extend their professional network, to learn about learning alongside scholarship and to gain new ideas to embed into their practice. We therefore set about designing in community and collaborative learning into professional recognition. First, we articulated the challenges faced by individuals pursuing fellowship to identify our learning design options.

Individuals face several challenges that span psychological, technical and developmental realms. We have highlighted these fellowship challenges and translated them to learning requirements. This reinforced the learning imperatives for our in-person/face-to-face fellowship community. We then factored these into our pivot online.

1. **Translating and applying Professional Standards Framework criteria**—Becoming literate in the Professional Standards Framework terminology and finding meaning within an individual's practice.
2. **Finding a fellowship voice**—Becoming more effective at assembling a narrative to represent Professional Standards Framework descriptors and reflect a person, a discipline and impactful contribution.
3. **Articulating learning and teaching practice to others who will be making a judgement on its impact**—Becoming more comfortable and skilled to draw out achievements, overcoming imposter syndrome and feelings of self-doubt, synthesising and presenting evidence that conveys the value and impact of one's practice.
4. **Claim/over-claim/under-claim**—Becoming more effective at pitching a professional claim that represents reality yet engages and does justice to practice. Becoming more conscious and literate in HE practice, evidence-bases and social comparison.
5. **Purposeful reflection**—Becoming a reflective practitioner, not only thinking but producing effective critically reflective writing.

Pivoting the Fellowship Community

Prior to March 2020 and the COVID lockdown, we ran a fellowship support offer across all four campuses. This support was face to face with no online offer other than a virtual learning environment, nothing beyond a shared storage space for handbooks and templates. As facilitators, we had begun to build a sense of community in our face-to-face/in-person offer, one that was open, honest, supportive and friendly.

COVID demanded a full pivot to online delivery. We invested energy in creating a space that not only was user-friendly and informative but

echoed our community ambitions set alongside the fellowship challenges outlined.

Microsoft Teams became our central hub for engagement. Each element of our online support offer helped to build a sustained community within professional recognition.

We refreshed all current resources with a community focus, for example, introducing a more peer-to-peer tone and sharing insights from colleagues who recently achieved fellowship. We created multimedia resources including short videos and animations to break down the large task of building a fellowship claim. We built resources around community voices, for example, curating shared ideas using Padlets, and real-time collaborative web platforms, including a #shelfie Padlet where colleagues shared photographs of their learning and teaching bookshelf to introduce others to pedagogic literature. Another popular Padlet was Procrastinators United with peers sharing tips on motivating academic writing. We began collecting and recording Fellowship Stories with Nottingham Trent University colleagues across all fellowship categories with hints and tips and discussing the teaching practice which featured in their fellowship submission.

Our Writing for Fellowship workshops were an opportunity to use the aforementioned materials in a facilitated session. Writing for Fellowship is a full-day workshop to support individuals to progress their fellowship writing. Individuals work through Posts shared on Microsoft Teams that tap into the learning requirements of fellowship (including mapping their learning and teaching practice, establishing a sense of impact and engaging in pedagogy for their practice). The posts are populated with materials, for example, narrated PowerPoints, Padlets and videos. The workshop is interspersed throughout the day with live calls where participants share progress and their practice reflections. Peer-to-peer support has worked well for those working on submissions opening discussions around learning and teaching during the pandemic.

All live workshops are complemented by an asynchronous offer, populated by narrated PowerPoints, videos and a step-by-step approach guided by posts on Microsoft Teams. This asynchronous offer has enabled more colleagues to step into fellowship support when possible—providing a more flexible approach.

We offer a monthly Microsoft Teams meeting where colleagues can drop-in, with no set agenda, and the discussion is participant-led. Some colleagues ask specific questions about their submission but that often leads to broader discussions for others to participate in. Some colleagues who join are at the beginning of their fellowship journey and some are nearing completion. Encouraging this mix has enabled participants to see the full journey and exchange tips.

Evaluating the Pivot

We surveyed individuals who engaged with the Nottingham Trent University online support offer over the previous year in relation to their perceptions of community and how the fellowship experience contributed to subsequent scholarly activities.

After obtaining ethical approval from the University's ethics committee, a semi-structured questionnaire was distributed to 100 participants who were recently awarded a fellowship category through the Nottingham Trent University scheme (Post March 2020); we report on 30 completed questionnaires.

We were conscious of the duality of our roles in respect of researchers/evaluators of our scheme and offering support to colleagues pursuing fellowship. We were, therefore, transparent in the participant information document about the purposes of the evaluation, the use of data and anonymity of respondents to avoid any bias when offering ongoing support (BERA, 2018).

Evidence of Value Creation as an Online Fellowship Community

The results of our evaluation have corroborated what we as facilitators observed during sessions and received as informal feedback. The responses gathered from Nottingham Trent University Fellowship alumni evidenced four value assets identified by Wenger et al. (2011). The following discusses each value asset in conjunction with our data.

Immediate Value

In terms of immediate value to respondents, the community-focused support allowed for collective reflection, storytelling and sharing. Hundred per cent of respondents would recommend the experience to colleagues, which is a good reflection of immediate value. Our research indicated a change to why respondents were applying for fellowship and a move from contractual and tick box requirements. In all, 67% of respondents applied for fellowship to develop their professional practice, whereas only 30% indicated a contractual requirement. The results showed the preferred offer was the drop-in sessions on Microsoft Teams, which were user-led and had a community feel. In all, 80% of respondents said writing workshops helped them make future decisions/ absorb information about learning and teaching by discussing with colleagues. In terms of building a sense of community through the fellowship offer, 93% agreed we increased a sense of community around fellowship with our online offer. Over the years, we have heard various comments around fellowship including tick-box, boring and burdensome. When asked to select words from a populated list, these prior words were not represented, and respondents highlighted that although challenging, the process was also supportive, valuable and transformational. Lonely, burdensome and ticking a box were unselected by all respondents. Our results did not echo results from the study by Van Der Sluis (2021) where ticking boxes and burdensome were reoccurring phrases. This disparity from other research findings strengthens the idea about the importance of the culture and *experience* of the scheme rather than just the mechanics of fellowship or the medium in which it is delivered (Onsman, 2009; Stes et al., 2013; Stewart, 2014; Shaw, 2018; Spowart et al., 2019; Van der Sluis, 2021). On reflection, we believe the form of research we selected and the quality of responses received resulted in a better evaluation of the value of fellowship. This was not only due to anonymity of responses but due to a range of respondents in terms of categories of fellowship achieved and role.

Potential Value

Potential value was also evident in responses including the stored-up knowledge capital colleagues referred to as they returned to their fellowship writing. Respondents commented that the tasks on the Microsoft Team helped build their submission. Respondents noted words such as directive, accessible, encouraging, helpful and informative when asked to describe support materials. 90% of respondents said working with others throughout the process advanced their knowledge about not only learning and teaching but also the fellowship practice. This highlights the strong personal asset gained from reflective practice through drop-in sessions and writing workshops. One participant stated their previous perception of it being a tick box exercise was debunked: 'I did not anticipate the great value I ultimately gained from reflecting on my practice. I also did not expect the experience to be so transformative; I now feel part of a community of educators and that I have something valuable to contribute; it has enhanced my self-esteem in this way'.

Applied Value

Respondents indicated value in the opportunity to see how their practice is aligned with globally recognised criteria and the potential to grow their practice within the Professional Standards Framework. There were visible changes in practice and connections to other scholarship activities. About 96.7% stated it helped them to share practice with colleagues and 86.7% found it gave them more awareness of other opportunities. We were keen to know whether the process impacted teaching practice overall, and 80% stated they altered their teaching practice as a result of producing their fellowship claim. Hundred per cent of respondents now think differently as an educator, with 72% reporting they had learnt about teaching and learning from colleagues in the workshop. More importantly, respondents felt they had introduced enhancements to their learning and teaching practice following the process. Ninety per cent agreed working

with others had advanced their learning. This clearly shows the process of completing a fellowship claim with support from an online community aided with taking learning and teaching way beyond a claim.

Realised Value

The research demonstrated how individuals extended their scholarship network and engagement because of the fellowship experience. Examples included invitations to present at a learning and teaching symposium, becoming a Higher Education Academy reviewer, authoring publications, reading more pedagogy, learning and teaching training and individuals who were planning to work towards the next category.

One participant commented, 'The support from both Kate and Laura has been invaluable and directly impacted my success in achieving AFHEA recognition. With their support and motivation, I am now working towards my FHEA application'. Another participant commented that completing the submission 'reignited my motivation for engaging with others in the sector and made me feel more part of a community (both within and beyond Nottingham Trent University). It has been a transformative experience for me; it has made my 'job' feel more like a vocation and given it new meaning'. There was an evident change in perception of fellowship. Respondents noted words such as reflection, future, value and development. One participant commented, 'I thought it would just be 'ticking a box' when I first started it, but having completed my SFHEA, it really transformed the way I think about education, the way I see myself as an educational professional, and the way I engage with teaching and learning. It has been brilliant'.

Confirming the causation of these value assets is obviously problematic. The value assets discussed may have been from increased networks individuals commented on or indeed about individuals becoming more confident in talking about their learning and teaching practice because of practising this within the community environment. There is more work to do to establish the value of the community in relation to nurturing confidence in owning and disseminating scholarly activities as a form of reputational capital.

Finally, we are aware of the limitations of our sample—small and likely to be more agreeable to fellowship—and thus have more of a thirst for additional development/scholarly opportunities.

Consolidating Our Learning and Move Forwards

Cataloguing experience and outputs of the fellowship experience has offered a sense of impact of the community approach and is being used to inform the strategic direction of the Nottingham Trent University Professional Recognition Scheme. Although we have moved the Nottingham Trent University support offer online, as facilitators we use the same approach but learnt how to pivot this online. Engagement in fellowship has increased through the offer of an online community, and there is increased community spirit.

To ensure we reinvest the evaluation findings and our reflections as scheme leads, we borrowed and completed a matrix developed by RSA (2020). This matrix invited us to consider whether any practices that we commenced or ceased during the crisis needed to be amplified or restarted. Plotting this matrix with our pivot activities enabled our new practice to emerge and to ready ourselves for fellowship support post-crisis.

As a pivot to online support, Microsoft Teams was a true find and is becoming the much-needed destination to host the fellowship community. The evaluation suggests colleagues like choice, in terms of medium, pace and delivery. The ability to step on, join in, silently or vocally engage, park and return to fellowship via Microsoft Teams are all positives we would like to retain. The benefits of blended learning are clearly emerging in fellowship support, so we want to continue to provide a support offer that suits the needs of individuals just like we would consider for student communities. Therefore, practice we will let go is reliance upon face-to-face interaction where colleagues are physically co-located to a looser and more porous engagement strategy. Moving from emergency to new practice will also include looking for more opportunities to extend choice in the way participants interact with our support offer. The synchronous/asynchronous as a binary approach is perhaps not as sophisticated as it could be. How can we encourage presence or continued interaction that

better reflects the individual journey through fellowship, not just as a process of submitting a claim but rather a career-long engagement? This will include not only more reflection on our facilitation methods, perhaps increasing our role as a way-finder and longitudinally supporting colleagues navigating professional development and scholarship.

Our new practice will continue to champion a community approach to fellowship, covering session design and resource production. Our evaluation suggests that nurturing a fellowship community fuels scholarship growth and value creation beyond awarding post-nominals. Essential to the community approach is peer exchange and practice sharing that happens as colleagues are invited to exchange ideas as they build their fellowship claim.

Online contributions and sharing have a tangible legacy—for example, when individuals share via posts, these continue to be seen after the event. This digital legacy conveys the ongoing presence and communicates to others that other people are working on this too.

Indeed, the context of the pivot was also a great leveller with an appreciation of colleagues working through lockdown, learning a new way of working and there was a tangible personal quality to people joining in from home.

This collective sense-making exercise has offered us priority areas for our next stage of development, learning from our pivot and retaining value in community.

Our interactions are about learning to make professional claims and finding a fellowship voice. This is very much about drawing out an individual's learning and teaching stories and helping them to continue that reflection beyond fellowship.

Conclusion

Van der Sluis (2021) provides commentary on the insignificant relationship between teaching quality metrics from the Teaching Excellence Framework (TEF) and increase in fellowship numbers.¹ Alongside Van der Sluis's assertion about the contested reliability of TEF metrics as an indicator of

¹Teaching Excellence Framework, Teaching Excellence and Student Outcomes Framework - GOV. UK (www.gov.uk) 2016.

teaching quality, there is also the argument that HEA fellowship might have a more diffuse impact and one that is shown through an individual's scholarship activity. The value creation exposed from our research suggests that creating a collaborative community through fellowship opens a channel for individuals to take their practice and scholarly activities forward as well as reflecting on successes they had. Encouraging confidence in owning and disseminating scholarly activities is also important to ensure individuals build on their reputational capital. This also needs to be cultivated through the culture, context and support mechanisms experienced by participants engaging in a fellowship scheme.

Fellowship can be an enjoyable and scholarly beneficial process. After all, it is a chance for individuals to gain recognition for their learning and teaching practice and reflect on achievements. Fellowship should not feel like a hard task. It should be a chance to celebrate learning and teaching; by sharing through a community, it enhances the celebration element and creates a collaborative space to encourage enhancement within learning and teaching.

References

- Bera. (2018). *Ethical guidelines for educational research*. (4th ed.).
- Cuthbert, K. (2018). "Doing" & "being"—HEA fellowship as a community. In SocMedHE18 at Nottingham Trent University.
- Freire, P. (1970). *Pedagogy of the Oppressed*. Continuum Publishing.
- Hibbert, P., & Semler, M. (2016). Faculty development in teaching and learning: The UK framework and current debates. *Innovations in Education and Teaching International*, 53(6), 581–591.
- Institute for Apprenticeships and Technical Education Academic Professional Standard. (2018). *Academic professional*. Resource document. Institute for Apprenticeships and Technical <http://www.instituteforapprenticeships.org/apprenticeship-standards/academic-professional-v1-0>
- Onsman, A. (2009). *Carrots and sticks: Mandating teaching accreditation in higher education*. Paper presented at the AARE Conference. <http://www.aare.edu.au>
- Peat, J. (2015). Getting down to the nitty-gritty: The trials and tribulations of an institutional professional recognition scheme. *Perspectives: policy and practice in higher education*, 19(3), 92–95.

- RSA. (2020). *The RSA future change framework*. <https://www.thersa.org/approach/future-change-framework>
- Shaw, R. (2018). Professionalising teaching in HE: The impact of an institutional fellowship scheme in the UK. *Higher Education Research & Development*, 37(1), 145–157.
- Spowart, L., Winter, J., Turner, R., Burden, P., Botham, K., Muneer, R., van der Sluis, H., & Huet, I. (2019). Left with a title but nothing else': The challenges of embedding professional recognition schemes for teachers within higher education institutions. *Higher Education Research and Development*, 38(6), 1299–1312.
- Stes, A., De Maeyer, S., Gijbels, D., & Van Petegem, P. (2013). Effects of teachers' instructional development on students' study approaches in higher education. *Studies in Higher Education*, 38, 2–19.
- Stewart, M. (2014). Making sense of a teaching programme for university academics: Exploring the longer-term effects. *Teaching and Teacher Education*, 38, 89–98.
- The Higher Education Academy. (2011). *The UK professional standards framework for teaching and supporting learning in higher education*. The Higher Education Academy.
- Van der Sluis, H. (2021). *Frankly, as far as I can see, it has very little to do with teaching*. Exploring academics' perceptions of the HEA Fellowships, Professional Development in Education. <https://doi.org/10.1080/19415257.2021.1876153>.
- Weiss, C. (1995). Nothing as practical as good theory: Exploring theory-based evaluation for comprehensive community initiatives for children and families. In J. Connell, A. Kubisch, L. Schorr, & C. Weiss (Eds.), *New approaches to evaluating community initiatives*. Aspen Institute.
- Wenger, E., Trayner, B., & de Laat, M. (2011). *Promoting and assessing value creation in communities and networks: a conceptual framework*. Rapport 18, Ruud de Moor Centrum, Open University of the Netherlands. Retrieved April 29, 2020, from <http://www.wenger-trayner.com/evaluation-framework>.

Part III

**Focusing on Pedagogic Design in
Remote and Blended Curricula**



25

Learning in Crisis: Analysing a University-wide Transition to Microlearning Using Infographics

Theresa A. Chika-James, Mercy C. Oyet,
and Mavis Leung

Introduction

The spread of coronavirus and the disease it causes, COVID-19, has transformed institutes of higher education from traditional teaching methods of face-to-face instructional methods to non-traditional teaching methods of remote learning using innovative technology and microlearning tools (Wang et al., 2021). Educational instructional designers have also advocated using microlearning tools to support learners to understand the use of digital technology amidst COVID-19 (Busse et al., 2020). In this chapter, we analyse the use of infographics as a microlearning tool during the

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outbreak of COVID-19. There is limited research that explores infographics as a microlearning tool, during a crisis period.

Studies on infographics indicate the usefulness of infographics to present complex amount of information in a clear and logical manner for learners to rapidly interpret and understand (Major & Calandrino, 2018; Samra, 2021). Depicted from the words 'information graphic', infographic uses texts, images and graphic illustrations to convey learning content in a visually appealing form (Krum, 2013; Ozdamli & Ozdal, 2018). However, the effective use of infographics lies in the visual design and presentation of data for learners to easily understand and use its information (Naparin & Binti Saad, 2017; Samra, 2021). Thus, scholars have offered guidance in the design of infographics to include the display of texts that can be easily read, colours that are consistent throughout and content that is relevant (Dunlap & Lowenthal, 2016). In addition to the design-specific suggestions, Siricharoen and Vinh (2017) indicated the importance of making infographics shareable for users to access the information by posting it on websites and via social networks.

Also, individuals' learning styles, defined as the characteristic strengths and preferences in the ways learners take in and process information (Felder, 1996), may influence their preference for learning tools and ultimately impact the effective use of infographics. Based on Felder and Silverman's (1988) visual, auditory and kinaesthetic modalities of learning, it is indicative that the graphic features of infographics would make it appealing to visual learners, as visual learners often prefer learning using the sense of sight. In addition, self-directed learners, conceptualised as individuals who take primary responsibility to engage in their own learning (Cheng et al., 2010), may opt to learn independently and use available learning resources to cope during difficult times. This insinuates that the nature of the learner as a self-directed learner and their learning styles may influence the use of infographics during a crisis period.

An additional factor that may influence individuals' ability to use learning resources during a crisis period is the contextual crisis situation. A crisis situation is defined as a major threat to the survival of a system with deep conditions of uncertainty and limited time to respond (Christensen et al., 2013). Barnett and Pratt (2000) noted that such crisis can lead to severe strain on organisational members' cognitive and

behavioural capacities. Several studies on the effects of COVID-19 and its related radical changes in higher education indicate its impact on the attitudes of students and faculty members with reports of increased stress levels (Abbas et al., 2020; Sokal et al., 2020). These findings are indicative that a crisis may trigger individuals' perceived stress levels.

Based on the preceding analysis, we investigate the effects of the design and accessibility of infographics, individuals' learning styles and perceived stress levels on the usage of infographics. We explore these identified factors using a case study of a Canadian university's transition to the use of infographics during COVID-19. The chapter starts with an overview of the case organisation referred to as THE university (pseudonym). Next, we present our research methods and empirical findings. We conclude with discussions on the use of infographics in a predicted post-COVID world.

The Case of THE University

THE university is a Canadian post-secondary institution that offers baccalaureate degrees, diplomas and certificate programmes to students. Its programme delivery is focused on student-centred learning to enhance an inspiring learning environment where students, faculty and staff collectively collaborate to learn. On this basis, the university established the Centre for Advanced Learning Excellence and eLearning Services to support the development of teaching competencies of faculty and enhance the learning experiences of students. While the educational developers at the Center for Advanced Learning Excellence provided teaching resources to faculty to foster student engagement and learning, the e-learning specialists at eLearning Services provided learning resources to enable faculty and students become proficient with the use of educational technology. The eLearning Services and Center for Advanced Learning Excellence services were offered via printed materials and discussions during in-person training workshops.

In 2018, eLearning Services discovered that faculty members' participation rate for the traditional in-person training was consistently declining. Faculty members indicated a preference for just-in-time one-on-one personalised learning. Consequently, the university leveraged on the concept

of microlearning and started developing microlearning short videos (3–5 minutes) in late 2019 to meet the learning needs of faculty. The outbreak of coronavirus in March 2020 and its impact on the restrictions to in-person workshops and classes accelerated the impromptu design of 5 infographics and the development of over 200 short video tutorials to assist faculty and students transition to remote online learning. With the urgency to ensure faculty members and students complete the 2019/2020 academic term, there was little time available for the eLearning Services staff to study and understand the intricacies to design infographics. Two infographics, Student Infographic 1 (Are You Ready for Online Learning?) and Student Infographic 2 (Staying Connected), were quickly designed towards students' online learning preparedness and to enable the connection of students' computer devices for synchronous learning. Both infographics were posted as a thumbnail on the university students' learning management system, Blackboard Learn. It was also posted in the university 'Student Resources' website page and shared via the university students' Facebook group. Three infographics—Faculty Infographic 1 (Lecture Recording Workflow), Faculty Infographic 2 (Maintaining Teaching Continuity) and Faculty Infographic 3 (Moving Exams Online)—were designed to aid the quick transition of faculty members to online teaching and assessment. The faculty infographics were posted in a section of the learning management system titled 'Blackboard Support' (Fig. 25.1).


In analysing users' access of the infographics during the outbreak of the pandemic (i.e. March–July 2020), we explored factors that account for the usage of the infographics. Specific questions posed were 'What factors are associated with the infographics usage rates for students and faculty members?' and 'To what extent did students and faculty members find the infographics useful and relevant?'

Research Methods

Institutional research ethics approval was obtained prior to data collection. We used closed and open-ended questions via two surveys hosted on Qualtrics survey platform to collect data from students and faculty. A total of 1012 students consented to complete the student survey. However,

STAYING CONNECTED

Synchronous Learning with Collaborate Ultra









 <p>Use a wired internet connection if possible. If using Wifi, try to be as close to the router as possible.</p>	 <p>Avoid bandwidth intensive activities in your household, such as playing online video games or watching streaming video.</p>	 <p>Use the Chrome browser and keep it current. Limit video use. Use video during the session only when necessary.</p>
 <p>Close all software programs and streaming services on your computer except for your meeting session.</p>	 <p>Use headphones to cut down on the background noise.</p>	 <p>Enter the meeting session at least 15 minutes before it starts, so you have time to conduct the audio and video check.</p>

Fig. 25.1 Staying connected infographic

254 student respondents completed less than 50 percent of the survey. Consequently, data from these respondents were deleted, and the data of remaining 758 student respondents were used in addressing the study's research questions. Eighty-four faculty members consented to complete the faculty survey. However, 13 respondents completed less than 50 percent of the survey. Data from these respondents were deleted, and the data of remaining 71 respondents were used in the study.

We assessed participants' use of the infographics through response to a general yes/ no question: 'Did you use this infographic?'. We drew from discussions noted by Dunlap and Lowenthal's (2016) aesthetic learning experience analysis instrument and Siricharoen and Vinh's (2017) study to measure perceived usefulness, perceived relevance and accessibility of the infographics. Self-directed learning was measured using Cheng et al.'s (2010) 20-item Self-Directed Learning Instrument (SDLI). Participants' perceived stress was measured using Cohen et al.'s (1983) 14-item Perceived Stress Scale (PSS).

Quantitative data analyses were conducted using SPSS 27. Descriptive frequency statistics were used to examine respondents' (student and faculty) usage rates of each infographic, and the extent to which respondents found the infographics useful and relevant. Because the number of faculty respondents who indicated that they had used at least one faculty infographic was low, we used the qualitative data provided by faculty respondents in response to the open-ended question: 'Please share your experience in the use or non-use of the infographics. Did you find the support of the design and distribution of the infographics to be useful for navigating through blackboard learn and other learning technologies?' Students' responses to the same question were also analysed. Bivariate correlational analyses were used to examine the factors that were associated with the perceptions of the infographics as useful and relevant.

We also used Braun and Clarke's (2006) thematic analysis to identify, analyse and interpret patterns of meanings of the responses from participants to the open-ended question on their use or non-use of the infographics. We constructed descriptive and in vivo codes from the data using the coding function in QSR NVivo. Next, we searched for themes, taking into consideration that some codes reflected similar meanings to form a subtheme, while other initial identified codes formed a main

theme. The different codes were sorted and collated into potential sub-themes and overarching themes.

Findings

Findings indicate that some respondents used the infographics developed by the university during the COVID-19 pandemic. For the student sample, 181 respondents indicated that they used Student Infographic 1, while 122 respondents indicated that they used Student Infographic 2. For faculty sample, 8, 5 and 5 respondents indicated that they had used Faculty Infographic 1, Faculty Infographic 2 and Faculty Infographic 3, respectively. Overall, more student respondents used the infographics compared to faculty respondents. The analysis of responses from the closed and open-ended questions in the survey provided insights into the factors associated with the use and non-use of infographics during the crisis period. These factors are presented in the following text:

Individual Differences

Differing Perceptions of Infographic Designs

Our data indicated that the few (8 in total) faculty who accessed and used at least one of the three faculty infographics found the infographic design and informational content helpful to apply the various functions available on the learning management system. Other faculty who saw the infographics but did not use it had a different opinion of the design, particularly the use of text. They noted that the faculty infographics had 'too much text', and thus the design deterred them from paying attention to the infographics.

Regarding the student infographics, most students who used both infographics found the texts and graphic displays eye-catching, simple, clear, very helpful and useful to navigate the university's learning management system and other learning technologies. In view of the aesthetic designs of both infographics, few students (6) indicated that the texts and

graphics in Infographic 2 were ‘good’, ‘cool’, ‘super straightforward’ and ‘expressed well’. They noted that the visuals complemented the text and summary of the information. On the contrary, some noted that Student Infographic 1 presented too much content, which was too long to read, was very vertically oriented, had a weird/bad colour scheme, had repetition of content and the title was quite misleading. As one student noted, ‘I could never read through the first one because of all the text’—thus indicating that few students were deterred from using Infographic 1 because of the design. Interestingly, in analysing the perceived usefulness and relevance of the infographics, quantitative data indicated that 138 and 102 student respondents’ perceived Student Infographic 1 as useful and relevant, while 48 and 64 students perceived Infographic 2 as useful and relevant, respectively. As the results indicate, Student Infographic 2 was found not to be that useful, and slightly less relevant to most respondents compared to Student Infographic 1. Further analysis of the students’ statements to the qualitative questions asked in the survey indicated that students were already familiar with most of the text content in Student Infographic 2:

The infographic has a lot of information that most people already know and weren’t very helpful ... Who has a computer with an ethernet cable these days? A lot of people use tablets or their phones or public wifi or dorm wifi. There is no option for a wired connection. This is not helpful info. (Female, Year-5 Student)

Their reasons may account for the high number of students who accessed and used Infographic 1 in comparison to Infographic 2 during the pandemic. Of further note, students recommended that there should have been infographics related to other topics that were useful and relevant to students at the time, including infographics, with a focus on ergonomics (given online studying), how to resolve technical difficulties and new websites to study.

Learning Styles

Several faculty members indicated their preference to understand the learning management system and the process to switch to online teaching through verbal communication and listening. Most faculty relied on the use of short video tutorials, virtual workshops and virtual one-on-one sessions provided by the Center for Advanced Learning Excellence and eLearning Services rather than the infographics. Other faculty members took the initiative, without seeking for assistance from eLearning Services and the Center for Advance Learning Excellence, to learn how to transition to online teaching and the use of the learning management system through YouTube videos. A faculty member noted:

There were a few technical things I needed in using BB and I found most of the answers I needed in a YouTube search, such as how to create multiple guess questions in excel to upload to BB [Blackboard]. (Male, Tenured, 14+years)

Students' statements indicated that students who accessed and used the infographics paid attention to the infographics based on their personal approach to learning through visuals. It was noted that the visual display helped to better contextualise ideas and concepts. As a student commented, 'I personally feel like I pay attention to visuals when given and feel that I can contextualize ideas/concepts better and associate them to my present world'. These findings suggest that learning styles are associated with the use and non-use of the infographics.

External Effects of University Management

Dissemination of the Infographics

Our data analysis indicated that most faculty members were not aware of the infographics because it was posted in the university faculty learning management system section, titled 'Blackboard Support'. Further analysis indicated that most instructors rarely access this section of the website when

they require assistance. Others, while completing the open-ended questions in the survey, attested to the difficulty in finding the infographics on the learning management system. The underlying issue of instructors' unawareness and inaccessibility of the infographics lies in the display and frequency of disseminating information to create awareness of the infographics. Interestingly, findings from students' comments indicated that students who accessed and used the infographics reported that both infographics were accessible on the students' learning management system as it was displayed on the main page. For students who did not use the infographics, they indicated they were not informed about the infographics, and it was not visible enough to be noticed and was difficult to find. A student noted:

I believe that the infographics work, but they need to be in more visible areas ... As I am writing this, I just realised that you put the infographics on the My Blackboard hub area. I would recommend displaying a portion of the graphic rather than leaving it as a thumbnail. (Male, Year 4 Student)

This extract indicates the effects of the dissemination of infographics on users' usage of infographics. Regarding the university management approach of disseminating the infographics, students recommended the use of email notifications and passing information about the infographics through faculty members as communication channels to disseminate information about the infographics.

Overload of Information

During the pandemic, faculty members were given several learning tools and more flexibility in their approach to teaching, leading to their decision to choose different preferred and familiar learning resources rather than the infographics. Interestingly, our data suggested that the varied learning options and information made available to instructors and the need to access the online platform created more stress that impacted some faculty members' non-use of the infographics. Although the information provided to faculty members was meant to better prepare them to teach online using the learning management system, it was clear from the comments that

some instructors found the information overwhelming. The mere thought of switching to online learning was also a stressor for some instructors:

as I said, I have not seen them. I am going to look for them now. It was overwhelming to just go online. (Female, Non-Tenured, 14years+)

We are overwhelmed with info flying at us. (Female, Tenured, 14+years)

Bivariate correlational analyses support the qualitative findings on the effect of the accessibility of infographics on students' perceived usefulness and relevance of infographics. In addition, the bivariate analyses revealed other factors associated the perceived usefulness and relevance of infographics. Regarding the usefulness of Student Infographic 1, the analyses found that perceived usefulness was significantly positively associated with perceived relevance ($r = 0.64$) and perceived accessibility ($r = 0.24$), and SDLI ($r = 0.36$), and significantly and negatively associated with perceived stress ($r = -0.20$); all were $p < 0.001$. With respect to Student Infographic 2, the analyses found that perceived usefulness was significantly positively associated with perceived relevance ($r = 0.56$), perceived accessibility ($r = 0.28$) and SDLI ($r = 0.50$); all were $p < 0.001$. However, there was a non-significant relationship with perceived stress ($r = -0.07$, n.s.). As for the relevance of Student Infographic 1, the analyses found that perceived relevance was significantly positively related to perceived accessibility ($r = 0.31$) and SDLI ($r = 0.29$); all were $p < 0.001$, and significantly and negatively related to perceived stress ($r = -0.16$, $p < 0.05$). Regarding Student Infographic 2, the analyses found that perceived relevance was significantly positively related to perceived accessibility ($r = 0.28$) and SDLI ($r = 0.50$); all were $p < 0.001$. However, there was a non-significant relationship with perceived stress ($r = -0.04$, n.s.).

Discussion: Learning Points from the Findings

The aim of this chapter was to analyse the use of infographics as a micro-learning tool during the COVID-19 pandemic. Using a Canadian university as a case study, our analysis revealed useful insights regarding

factors associated with use and non-use of infographics during the outbreak of COVID-19. These factors include the design of the infographics, learning styles of faculty members and students, the dissemination of the infographics, and the amount and pace of information shared during the pandemic. Our analysis and discussion of these factors presents four learning points towards a plausible approach to design and share infographics in universities during a crisis period.

First, the study indicates the effects of a global pandemic on rapid changes in a Canadian university. In the case of THE Canadian university, there was limited time to learn or engage in participative dialogue with students, faculty or educational design experts on appropriate ways to design and share infographics as a microlearning tool. Nonetheless, without a deliberate participative dialogue and adequate research on the design and mode to share infographics, our study indicated that some students and few faculty members found the infographics useful and relevant based on their perceptions of the aesthetic design and informational content. For maximal user access and relevance of infographics, our study, in accordance with Dunlap and Lowenthal's (2016) analysis, suggests instructional designers should focus on ensuring valuable information is included in the text content of the infographics, as learners will seek for informational content that is useful in such crisis period. In addition, the aesthetic designs should be simple and the text content succinct to reduce any distractions that may arise from too much content (Siricharoen & Vinh, 2017). Considerable thoughts should be given to the length of the infographics to ensure the entire content fits into one page. The relevance of the content and simplicity of the design become more pertinent in a crisis period where there is limited time for learners to read the entire content. In situations where there is a need to include more information in the infographics, instructional designers should consider splitting the information into two or more infographics than condensing too much information in one infographic. The small learning content of the infographic with a focus on a single fact makes it a more representative microlearning tool (Emerson & Berge, 2018).

Second, our study contributes to the importance of individual learning styles in the use of infographics during a crisis period. It suggests that learning styles of individuals could influence their preferences for the use

of infographics when given several learning tools. Also, our study highlights the associated effects of individuals' self-directed learning and their perceived usefulness and relevance of infographics. In examining the relationship between students' perception of the usefulness and relevance of infographics, and students' self-directed learning, the results showed that students' perceived usefulness and relevance of infographics is positively associated with their self-directed learning. A possible explanation for our findings is that university students, as adult learners, take a more autonomous approach in their learning. Thus, the more students are self-directed or independent in their approach to learning, the more they perceive infographics as useful and relevant. The implication of these analyses to the design of infographics is that while infographics will appeal more to visual learners, it would equally be useful and relevant to university students, as self-directed learners, during times of crisis. Clearly, more research is needed to examine the relationship between students' learning styles and self-directed learning using Fleming's (1995) VARK questionnaire and Cheng et al.'s (2010) SDLI.

Our study also highlights the importance of disseminating information about infographics. While several studies focus on the visual design of infographics to access its effectiveness (Dunlap & Lowenthal, 2016; Naparin & Binti Saad, 2017), very few studies with the exception of Siricharoen and Vinh (2017) indicate the vital aspect of how to communicate and create awareness about infographics. As the current study shows, the means used to publicise information about the infographics largely influenced users' access and perceived usefulness and relevance of the infographics. While students' infographics was posted on several accessible sites, the infographics for faculty members was posted in a section of the university faculty learning management system that was rarely used by faculty members. Posting the infographics directly on the university's learning management system, sending it via email notification, newsletters and other social media sites are possible avenues to create awareness and support accessibility. These means of disseminating microlearning tools become pertinent in a predicted post-COVID world where there may be less in-person interactions in educational institutions and more remote online and other forms of hybrid learning. However, in the sharing of infographics as a microlearning tool, our research findings

suggest careful thought should be given to the amount and pace of information shared across the university, as too much information can be overwhelming for organisational members during crisis period. This contextual factor is identified as our final learning point: the need for university leaders to find a delicate balance between the amount and pace of information shared during a time of crisis.

On the effect of the perceived stress levels on individuals' usage of infographics, our findings indicated inconsistent results in the relationship between students' perceived stress and the perceived usefulness and relevance of both students' infographics. The inconsistency in the results could be linked to the informational content of the infographics. For instance, our findings indicate Student Infographic 1 provided more detailed and useful informational content, and it was found significantly negatively related to stress, while Infographic 2 contained information students were accustomed to and had a non-significant relationship with perceived stress. This suggests the more useful and relevant students perceived the infographic, the less stressful they were. Regarding the effects of stress on faculty members, qualitative comments from few instructors reveal there was perceived strain from the internal changes in the university, particularly the overload of information shared. A possible explanation of our findings is that individuals respond differently to changes in organisations during crisis. While others may express perceived stress that impacts their perception of the use, usefulness and relevance of infographics, this differs from individuals who may express perceived stress but with no impact on their use, perceived usefulness and relevance of infographics. The important implication of these findings is that, regarding the use of infographics in such crisis contexts, some individuals demonstrate the ability to cope and adapt to organisational change. Further exploration on the particularities of individuals' responses to adapt to organisational change—the use of infographics—during a crisis might reveal insights into the literature on individual learning and organisational change in a crisis period.

References

- Abbas, M., Dhane, M., Beniey, M., Meloche-Dumas, L., Eissa, M., Guérard-Poirier, N., El-Raheb, M., Lebel-Guay, F., Dubrowski, A., & Patocskai, E. (2020). Repercussions of the COVID-19 pandemic on the well-being and training of medical clerks: A pan-Canadian survey. *BMC Medical Education*, 20(1), 1–9. <https://doi.org/10.1186/s12909-020-02293-0>
- Barnett, C. K., & Pratt, M. G. (2000). From threat-rigidity to flexibility: Toward a learning model of autogenic crisis in organizations. *Journal of Organizational Change Management*, 13(1), 74–88. <https://doi.org/10.1108/09534810010310258>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Busse, J., Lange, A., Hobert, S., & Schumann, M. (2020). How to design learning applications that support learners in their moment of need—Didactic requirements of micro learning. In *AMCIS Proceedings 15* (pp. 0–10).
- Cheng, S.-F., Kuo, C.-L., Lin, K.-C., & Lee-Hsieh, J. (2010). Development and preliminary testing of a self-rating instrument to measure self-directed learning ability of nursing students. *International Journal of Nursing Studies*, 47(4), 1152–1158. <https://doi.org/10.3928/00220124-20130301-26>
- Christensen, T., Johannessen, M., & Lægreid, P. (2013). A system under stress: The icelandic volcano ash crisis. *Journal of Contingencies and Crisis Management*, 21(2), 71–81. <https://doi.org/10.1111/1468-5973.12005>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behaviour*, 24(4), 385–396.
- Dunlap, J. C., & Lowenthal, P. R. (2016). Getting graphic about infographics: Design lessons learned from popular infographics. *Journal of Visual Literacy*, 35(1), 42–59. <https://doi.org/10.1080/1051144X.2016.1205832>
- Emerson, L. C., & Berge, Z. L. (2018). Microlearning: Knowledge management applications and competency-based training in the workplace. *Knowledge Management & E-Learning: An International Journal*, 10(2), 125–132.
- Felder, R. (1996). Matters of style. *ASEE Prism*, 6(4), 18–23. https://doi.org/10.1057/9781137350237_4
- Felder, R., & Silverman, L. K. (1988). Learning and teaching styles in engineering education. *Engineering Education*, 78(7), 674–681. <http://www.ncsu.edu/felder-public/ILSpa.html>

- Fleming, N. D. (1995). I'm different; not dumb. Modes of presentation (VARK) in the tertiary classroom. In *Research and development in higher education, proceedings of the 1995 annual conference of the higher education and research development society of Australasia (HERDSA)* (Vol. 18, pp. 308–313).
- Krum, R. (2013). *Cool infographics: Effective communication with data visualization and design*. John Wiley & Sons.
- Major, A., & Calandrino, T. (2018). Beyond chunking: Micro-learning secrets for effective online design. *FDLA Journal*, 3(13). <https://nsuworks.nova.edu/fdla-journal>
- Naparin, H., & Binti Saad, A. (2017). Infographics in education: Review on infographics design. *The International Journal of Multimedia & Its Applications*, 9(4/5/6), 15–24. <https://doi.org/10.5121/ijma.2017.9602>
- Ozdamli, F., & Ozdal, H. (2018). Developing an instructional design for the design of infographics and the evaluation of infographic usage in teaching based on teacher and student opinions. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(4), 1197–1219. <https://doi.org/10.29333/ejmste/81868>
- Samra, E. M. (2021). The effect of introducing infographic pattern on developing cognitive understanding by using AI technology for university students during the COVID-19 pandemic. *Journal of Healthcare Engineering*, 21, 7197224. <https://doi.org/10.1155/2021/7197224>
- Siricharoen, W. V., & Vinh, P. C. (2017). Question matrix method according to divided dimensions of infographics evaluation. *Personal and Ubiquitous Computing*, 21(2), 219–233. <https://doi.org/10.1007/s00779-016-0988-7>
- Sokal, L., Trudel, L. E., & Babb, J. (2020). Canadian teachers' attitudes toward change, efficacy, and burnout during the COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100016. <https://doi.org/10.1016/j.ijedro.2020.100016>
- Wang, T., Towey, D., Ng, R. Y., & Gill, A. S. (2021). Towards post-pandemic transformative teaching and learning. *SN Computer Science*, 2(4), 1–7. <https://doi.org/10.1007/s42979-021-00663-z>



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Hybrid Delivery of Practical Chemistry Courses Using Pre-lab Tutoring System

Gita Sedghi and Catherine Cropper

Introduction

Practical skills are a fundamental part of undergraduate science courses (Carnduff & Reid, 2003) and play a crucial role in enhancing the student learning experience, increasing motivation and enjoyment of learning. Practical courses equip students with hands-on synthetic experience, data acquisition and analysis; enhance their transferrable skills, and health and safety knowledge; and connect with real-world problems (Carnduff & Reid, 2003). Consequently, students will be able to understand and apply scientific concepts for the duration of their degree and beyond (Overton & Garvey, 2017).

A laboratory is where theory is put into practice, and students gain necessary skills for industry or academia. It is crucial, therefore, to support students time in the laboratory by providing supplementary resources both before and after their time in the lab. The online pre-lab tutoring

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system (Sarmouk et al., 2020), including relevant resources and assessment, has been implemented in several higher education institutions (Rennie et al., 2019). Reid and Shah (2007) state that most students do not read the experimental script in advance, leading to information overload during a lab session. Pre-lab activities are designed to be more engaging than simply reading the script and to motivate students to have a good understanding of the experimental aim, procedure and how to process the data they acquire. Ultimately, pre-labs help prevent the cookbook approach to experiments.

To teach both practical and transferable skills, which is the objective of any practical course, we need to be creative and apply different delivery and assessment methods to stimulate students' enthusiasm and confidence in the lab. Supplementing teaching materials with pre-lab activities, including visual aids and online assessments, offers inclusive learning and teaching environment to support students with different abilities, background knowledge and skills. Pre-lab tutoring system tests students' understanding, ensures readiness for lab sessions (Gryczka, Klementowicz, Sharrock, Maxfield & Montclare, 2016), raises confidence (Jolley et al., 2016) and increases engagement and enjoyment from the course.

COVID-19 disruptions forced a rapid switch to remote teaching and learning at universities in the academic year 2019–2020. Learning from experience gained at the beginning of the pandemic, universities delivered selected course components online to minimise face-to-face contact and adhere to social distancing measures in the academic year 2020–2021. Although there were shortfalls in online education, educators realised the scope for permanent remote delivery of selected materials and courses. However, hybrid delivery of practical courses presented more of a challenge due to the requirement of skills gained by hands-on experience. Various online delivery formats were used during the pandemic, including lab simulations, take-home lab kits and live streaming experiments (Woelk & Whitefield, 2020). Although the initiatives worked well, no educators believe that practical courses should remain entirely online. Nevertheless, the hybrid lab course delivery experience shows that it could work permanently should it be carefully considered.

Hybrid labs provide an inclusive course for all students to improve their skills and enhances their lab experience. Students with personal

issues, care responsibilities, disability and language problems will have time to spend on their lab skills and get themselves prepared to make the most of the time in labs (Bactol et al., 2017). Indeed, guided pre- and post-online activities provide the opportunity for students to move beyond surface-level thinking by understanding the aim, objectives and procedure of the experiments in addition to writing a context-based report.

This chapter will present the pre-lab activities' implementation and evaluation and how the outcomes were analysed and utilised to deliver hybrid practical courses in the future. Our approach to switching to remote delivery of labs due to COVID-19 will be explained, including electronic report marking and feedback. Furthermore, the advantages and disadvantages of online, face-to-face and hybrid lab delivery will be reflected upon with a view to modifying traditional practical courses in the future. The effect of removing hands-on experiments on the quality of reports and student performance will be discussed to conclude whether students can learn effectively using a remote lab. To contextualise our approach, a Year 2 lab course has been selected as a case study.

Contextual Background

Practical Chemistry in the Department of Chemistry

Laboratory work is a fundamental part of our undergraduate programmes in the Department of Chemistry. Although the practical courses are part of the curriculum in all years of studies, the course structure and delivery vary from one year to another. There are about 150 new students enrolled in our programmes each year. While Year 1 practical is a component of core chemistry modules, they become standalone courses in higher years. Year 1 students are split into small groups (8–12 students) supervised by a designated demonstrator for a whole semester. From Year 2 onwards, students perform experiments independently, in pairs or groups without working with a designated demonstrator; this ensures a gradual boost in independence in line with the experiments' increasing complexity.

Students are provided with the relevant experimental scripts in advance of the lab sessions to ensure preparedness. The scripts include an introduction, experimental procedure and data analysis instructions. Before pre-labs were introduced, Year 1 demonstrators delivered a 15-minute introductory talk at the beginning of each session to ensure students were fully informed of the experimental procedure and aware of health & safety measures. Despite the effort made to prepare students for their experiments, the demonstrators reported a lack of students' understanding of practical, which resulted in unnecessary mistakes and running out of time to complete experiments.

We identified three problems, which resulted in a lack of preparedness. First, depending on the experiment and equipment involved, sufficient details cannot always be included in an experimental script at the level required. Given the diversity of equipment and their availability on the day, students might spend too much time figuring out how to work with a piece of equipment in a limited time offered in a teaching lab. The lab time should be used to enhance the essential practical skills regardless of different models of equipment. Additionally, some students did not either read the experimental script in advance of the lab session or understand it fully. This led to the third issue, lack of health & safety awareness. Considering the issues mentioned, we recognised the necessity of additional support to prepare students in advance of the lab sessions.

The lack of preparedness reduced students' confidence in their ability to perform chemistry experiments, so we looked for a solution to ensure they were ready for their practice and enjoy the lab time. We investigated different types of pre-lab tutoring systems that could be adapted to our chemistry programmes and students' requirements. We aimed for an inclusive system to accommodate our students' needs, including disabled students and those from different background, language or educational environment. We explored a potential pre-lab tutoring system embedded in the existing virtual learning environment to allow students to work in their own time to understand the practical better and produce higher quality data analysis and lab reports. In the first instance, we created computer simulations of a couple of experiments for online learning. However, the computer simulations did not cover sufficient details of the experiments, for example, working with different models of equipment.

Therefore, we included these simulations as part of the introductory chemistry lab procedures and looked for more suitable visual aids. Consequently, we planned the pre-lab activities consisting of:

- Experimental scripts, COSHH and risk assessments
- Visual aids (videos and photographs)
- Online assessment and feedback

Video clips and photos of the key skills used in the experiments with details of the equipment and experimental procedures help students with their practical courses. The video clips are more popular when created by former students who see things from a student perspective to identify common mistakes and highlight valuable tips and guidelines. In addition, PowerPoint slides are created using the photos of equipment and their setup.

Online assessments are designed to examine the students' comprehension of health and safety, underlying theories, experimental procedure and treatment of results. We require students to score 100% on health and safety questions. This part of the pre-lab test can be attempted multiple times. Students then complete an experimental pre-lab test with one attempt to answer the questions. Some questions are directly linked to the videos and PowerPoints to ensure students use visual aids to support their learning. Assessments are marked, and immediate feedback is given in our virtual learning environment automatically. Each student must pass the pre-assessment test to a satisfactory level before beginning the experimental work.

COVID-19 Disruptions

In March 2020, face-to-face teaching, including practical courses, was cancelled due to COVID-19. Therefore, the Year 2 physical and inorganic chemistry lab module switched to remote delivery halfway through the course. As a result, the supplementary pre-lab resources replaced the hands-on experiments. Having directly linked online questions with visual aids, we made sure students familiarised themselves with the

experimental procedures. We provided students with typical data gained in each experiment. Students analysed the data, wrote their reports and submitted online. Usually, marking would take place in the lab, in students' presence, so they receive instant feedback to improve their future reports. During the labs' remote delivery, demonstrators marked the reports and gave online written feedback to students. Although the students gained sufficient understanding of the experiments using the online tutoring system to analyse the data and write their reports, the quality of the online reports was reduced due to the lack of instant feedback in students' presence. Also, demonstrators took longer to mark the reports due to the absence of a discussion between markers and students.

Despite planning the hybrid delivery of labs in the academic year 2020–2021, the Year 2 physical and inorganic practical course was delivered entirely online due to COVID-19 lockdown restrictions and limited laboratory availability because of social distancing measures. The format was modified from 2019–2020 by the inclusion of synchronous marking sessions using Zoom or Teams, in which the dialogue between students and markers allowed instant feedback on reports. Instead of timetabled marking sessions, demonstrators and students organised the marking at a suitable time within a week. Therefore, the pre-lab resources were 'repurposed' to allow students to observe how the experiment was performed. The pre-lab health and safety assessments were still required to be completed, but students were not allowed multiple attempts given the circumstances.

Evaluation Procedure

Before the Pandemic

The evaluation of the pre-lab activities launched in the academic year 2011–2012 showed a significant impact on the students' performance and experience. The pre-lab was piloted in the Year 1 organic and physical chemistry practical courses in the first year. The activity was optional, except for the last experiment. Not many students took the optional

pre-lab; however, the lab demonstrators reported that students who undertook the online activities spent less time in the lab to complete the experiments and were more confident and informed about their practices. Having had the feedback, we made the pre-lab compulsory from 2012–2013 onwards. Currently, all Year 1–3 practical courses are covered by the online tutoring system.

Ethical approval was sought to evaluate the pre-lab activities before and during the pandemic. Anonymous questionnaires and focus groups were used to assess the online tutoring system. The questionnaire response rate was more than 60%, and ten students participated in the two focus groups. The evaluations' outcomes showed that 73% and 91% of Year 1 and Year 2 students, respectively, found the online assessments helpful to assess their preparedness to start a new experiment. A total of 89% of Year 1 students found the PowerPoint slides of photos of experiments useful to understand the experiments. In comparison, more than 94% of Year 2 students found visual aids consisting of photos and videos helpful. The videos were the most popular visual aid for the Year 2 students. Also, Year 2 students preferred the videos created by former students compared to the academic staff.

They seem to know how to explain it better as they did the experiments themselves.

It helps to see these from a student's point of view. They point out to key things.

The pre-lab activities have made the operations of laboratory instruments and experimental procedures more understandable. Students can better understand the logical relationship between experiments and theories that they have been taught. The laboratory becomes a safer environment for learning, and expensive chemicals are less likely to be wasted. Efficient use of time in the laboratory for both students and demonstrators is another advantage of the pre-lab tutoring system (Schmidt-McCormack et al., 2017). Our evaluation's outcomes agree with the previous research that videos of the experimental procedures enhance students' understanding of their practical and allow them to complete their experiment in the allotted time (Stieff et al., 2018).

Fantastic! Saves a lot of time of labs and helps understanding during the write up.

In addition to the benefits for students mentioned above, the pre-lab saves time in the lab that would usually be spent explaining or preparing students to undertake experiments. It is impractical to measure the pre-lab's impact on students' marks as all students undertake online activities. Still, students feel more confident and prepared to start the experiments, work with instruments, and often need little instruction from demonstrators. They are also more willing to self-solve issues they encounter before approaching a demonstrator for help.

Pre-lab saves time by getting rid of those basic questions that we all have without pre-labs. Videos provide a really good background of the experimental techniques.

One of the significant advantages of the student's online pre-lab is the consistency of laboratory preparation. Therefore, the variability of the quality of the introductory presentation by an individual demonstrator is removed. From an administrative perspective, the students' laboratory classroom time is used more efficiently. Consequently, there is a potential for enhanced utilisation of facilities.

In addition, students felt that the pre-lab created a community of practice because they tend to discuss the experiments ahead of being in the labs. The increased engagement also had a positive impact on the health and safety in the labs. We noticed that students were more conscious about general housekeeping and chemical waste disposal.

As mentioned, the pre-lab has allowed us to ensure that all students receive the same coherent introduction to the experiments they are to undertake. The pre-lab resources have been developed to be inclusive. This has been achieved by having multiple resources for each experiment (video, PowerPoint, reading materials, quizzes and photographs) to ensure all learning styles are met and that they are easy to use for non-native speakers or students with disabilities.

For any given experiment, there may be various instruments that can be used, for example, measuring UV-Vis absorbance spectra. Before

pre-labs were implemented, demonstrators would need to instruct students individually or in small groups to demonstrate how to use the instruments. Now, students watch video demonstrations specific to the experiment using different instruments and have access to standard operating procedures for each piece of equipment.

During the Pandemic

While labs were closed, students completed experiments remotely where possible using a variety of mechanisms. For experiments where data sets were provided for students to analyse, pre-lab resources were vital for understanding how the data were acquired. For all experiments, students were still required to complete pre-lab assessments so that their understanding of the experiment could be assessed and that they were able to comment on the reliability of the data in their reports.

Considering the significant changes to our practical course during the pandemic, we sought ethical approval to assess the new structure and delivery of the experiments. The evaluation of the course, including pre-lab, which was built upon the previous work, was undertaken during the lockdown and COVID-19 prevention measures on campus. Therefore, there was little interaction between students and staff at the time. We believed the best way to evaluate the system was to conduct focus groups to utilise dynamics of group interaction to capture explicit views shaped by reflective discussions. We recruited a trained PhD facilitator who delivered two focus groups for twelve students.

Previously, pre-lab health and safety assessments were multiple-attempt non-credit bearing tests, but during remote delivery were changed to single-attempt credit-bearing tests. Feedback from students about this approach suggested that they preferred having a single-attempt test because it motivated them to engage with the material. Students felt that pre-lab resources and assessments were an essential link in understanding the virtual experiments.

This year, I understood the experiments better because last year I had multiple attempts, so I tried to get hundred percent for the online test, but not

to engage in with and actually take it in. This year, I've actually understood and implemented it into the lab reports.

Daily online drop-in sessions were arranged to support students during their remote data analysis and report writing. During these sessions, we noticed a difference in questions from students to those normally asked in the lab. Students questioned the context of the experiments and referencing literature. Comparing the reports submitted during remote delivery to those written up during face-to-face labs, there was a difference in focus. Reports received during remote delivery focussed more on the context and quality of the data, while those written during the live labs focussed on how the experiment was performed and the data acquired as a consequence.

Students also supported synchronous online marking sessions as they felt they had the opportunity to demonstrate their understanding of the experiment, discuss their results and receive instant feedback from demonstrators. The synchronous marking sessions also allowed students to build their confidence in communicating science in preparation for future years.

Synchronous online marking was really good. The discussion with a demonstrator improved my ability to write a lab report drastically throughout the year. Going through the results and presenting them in real-time was an incredibly useful exercise.

There were a couple of experiments that were particularly successful when delivered remotely. One of the experiments uses a variety of software to process, simulate and analyse data, and so was already designed to be heavily computer based. We found that this experiment was improved by the use of synchronous online sessions where students were able to work remotely on their experiment but had access to demonstrators and other students in real time. Usually, this would be delivered in a computer suite with demonstrators walking around. Having the session on Zoom or Teams allowed students instant access to help when they needed it and saved demonstrator time in repeating answers to common questions. Outside of the synchronous sessions, students also had access

to discussion boards and smaller working groups on Teams to support each other.

I have gained greater understanding doing it virtually than I would have if this was done on campus, the access to demonstrators was great. Bouncing ideas of my group members was good too.

Despite the successes of remote lab delivery, our evaluation also showed that hands-on experiences could be supplemented but not replaced by online learning (Köller et al., 2015). This is in line with another study (Son et al., 2016) about replacing hands-on science experiments with virtual labs that hybrid practical courses resulted in better grades and more positive student attitudes. Students also suggested improvements to existing pre-lab resources, which are likely to be more prevalent for hybrid or remote lab delivery. These included having videos that include a screen capture of instruments in use and data being recorded.

From personal experience, I learn much better from a hands-on experience.

Scholarship on Long-term Impacts

Our experiences of face-to-face, remote and hybrid delivery of practical courses showed potential for further improvement using technology-enhanced learning, including virtual experiments and synchronous online marking. Based on the students' feedback and evaluation of the approach we took before and during the pandemic, we aim to capitalise on the advantages of remote delivery coupled with face-to-face laboratory teaching and learning (Bashir et al., 2021) in the academic year 2021–2022.

Use of Pre-labs

The pre-lab tutoring system has been part of our practical modules throughout the degree courses for the past eight years. It has been

evaluated and proved to be successful in enhancing students' experience and performance. Online tests assess students' understanding of the background theory, experimental procedure, health & safety, and data analysis. The pre-lab played a vital role in the remote delivery of labs during the pandemic. However, the hands-on lab experience is an essential part of chemistry degrees that cannot entirely be replaced by a remote lab (Scheckler, 2003). For these reasons, we will maintain pre-lab resourcing and assessments for all experiments, those delivered remotely and in the lab. We also aim to develop pre-lab resources to include screencasts of software and introductions to the aims of experiments where they are missing. Also, we will allow only one attempt for both health and safety and experimental pre-lab assessments as students commented on their lack of engagement with the material if they were able to make multiple attempts. For students who do not reach the threshold pass rate on the pre-lab assessments, an oral test will be given in the lab at the start of the session. This mechanism has been used previously with variable onerousness.

Delivery of Remote Experiments and Live Labs

We found that online delivery and refocussing on data analysis and write-up only allowed students to explore the context and literature of the experiment leading to detailed reports and a deeper understanding of the context. This was remarked upon by demonstrators after completing synchronous marking sessions. We aim to deliver selected experiments remotely (Accettone, 2022) for this reason.

We aim to deliver some experiments remotely/virtually using synchronous demonstrating sessions in the future (Gamage et al., 2020). We found demonstrating to students doing experiments on a computer-aided delivery more accessible and working in breakout rooms limited the repetition of answers to common questions. It was easier to run through a common problem by asking students to re-join the main room on Zoom rather than shout across a computer suite as would happen during face-to-face delivery.

In the lab, we aim to focus on laboratory-based and transferable skills and build a reflection task for students to audit their skills. The experiments will be carefully selected to ensure students cover all the skills required to meet the module's learning outcomes.

For the Year 2 cohort who experienced only remote delivery, we aim to provide some practical experience of the techniques they have only viewed using the pre-lab resources. This will take place before their Year 3 practical course. Our aim here is not for students to complete full experimental procedures but to complete a skills passport for techniques they would have encountered during the virtual experiments. For this, students will be required to revisit pre-lab resources and will be expected to reflect on the skills they have gained.

Synchronous Online Marking

Synchronous marking sessions were an essential part of the remote lab and previous face-to-face experience for both demonstrators and students. We plan to keep synchronous online marking (Sutadji et al., 2021) as we advance. There will be an added challenge to running these sessions remotely as students' timetables will become restricted by more face-to-face sessions in the next academic year. We may approach this by having more flexibility in the timing of the sessions. In the academic year 2020–2021, the timings of marking sessions were not restricted by the course leaders. We asked demonstrators and students to book synchronous sessions mutually by arranging the marking sessions between them.

Summary

We have planned for the followings in the future lab course.

- Pre-lab tutoring system
- Skills audit for hard skills
- Reduced number of face-to-face experiments by online delivery of selected experiments

- Online submission of lab reports
- Synchronous online marking for instant formative feedback

We will assign students to selected in-lab experiments to ensure meeting the learning outcomes of the course. We will run an audit of the equipment and chemical techniques to guarantee students gain the required practical skills. Students will experience producing samples, setting up the apparatus, and working with and collecting data directly from the equipment. The virtual experiments will be carefully selected to provide students with deep data analysis and problem-solving skills.

Hybrid lab delivery will free up significant space in students' timetables in the future due to the absence of marking sessions and the addition of virtual experiments. The flexibility in time and inclusive teaching delivery and assessment will enhance students' experience and lab performance as it will meet the students' requirements with different learning styles, abilities and availabilities. Our hope is that this approach will not only be inclusive but can be quickly changed so that we can adapt to any future events.

References

- Accettone, S. L. W. (2022). Student Perceptions of remote chemistry laboratory delivery models. *Journal of Chemical Education*, 99(2), 654–668. <https://doi.org/10.1021/acs.jchemed.1c00757>
- Bactol, K., Laursen, A. E., & De Araujo, C. (2017). An option of hybrid virtual labs in an introductory biology course as the means for accessible learning and enhancing student education. *International Journal for Infonomics*, 10(1), 1–8.
- Bashir, A., Bashir, S., Rana, K., Lambert, P., & Vernallis, A. (2021). Post-COVID-19 adaptations; the shifts towards online learning, hybrid course delivery and the implications for biosciences courses in the higher education setting. *Frontier in Education*, 6. <https://doi.org/10.3389/feduc.2021.711619>
- Carnduff, J., & Reid, N. (2003). *Enhancing undergraduate chemistry laboratories: Pre-laboratory and post-laboratory exercises*. Royal Society of Chemistry.
- Gamage, K. A. A., Wijesuriya, D. I., Ekanayake, S. Y., Rennie, A. E. W., Lambert, C. G., & Gunawardhana, N. (2020). Online delivery of teaching

- and laboratory practices: Continuity of university programmes during COVID-19 pandemic. *Education Sciences*, 10(10). <https://doi.org/10.3390/educsci10100291>
- Gryczka, P., Klementowicz, E., Sharrock, C., Maxfield, M., & Montclare, J. K. (2016). LabLessons: Effects of electronic prelabs on student engagement and performance. *Journal of Chemical Education*, 93, 2012–2017. <https://doi.org/10.1021/acs.jchemed.6b00394>
- Jolley, D. F., Wilson, S. R., Kelso, C., O'Brien, G., & Mason, C. E. (2016). *Analytical thinking, analytical action: Using prelab video demonstrations and e-quizzes to improve undergraduate preparedness for analytical chemistry practical classes.*, 93, 1855–1862. <https://doi.org/10.1021/acs.jchemed.6b00266>
- Köller, H., Olufsen, M., Stojanovska, M., & Petruševski, V. (2015). Practical work in chemistry, its goals and effects. In I. Maciejowska & B. Byers (Eds.), *A Guidebook of good practice for the pre-service training of chemistry teachers* (1st ed., pp. 87–106). Jagiellonian University.
- Overton, T., & Garvey, D. J. (2017). Development of key skills and attributes in chemistry. *Chemistry Education Research and Practice*, 18, 401–402. <https://doi.org/10.1039/c7rp90006f>
- Reid, N., & Shah, I. (2007). The role of laboratory work in university chemistry. *Chemistry Education Research and Practice*, 8(2), 172–185.
- Rennie, T., Eelu, H., Lusepani, M., Keendjele, T., Julka, E., & Hunter, C. J. (2019). “A is for Aspirin” theme prelab video resource in foundation organic chemistry for general health sciences training in Namibia. *Journal of Chemistry Education*, 96(6), 1096–1101. <https://doi.org/10.1021/acs.jchemed.8b01020>
- Sarmouk, C., Ingram, M. J., Read, C., Curdy, M. E., Spall, E., Farlow, A., & Patel, B. A. (2020). Pre-laboratory online learning resource improves preparedness and performance in pharmaceutical sciences practical classes. *Innovations in Education and Teaching International*, 57(4), 460–471. <https://doi.org/10.1080/14703297.2019.1604247>
- Scheckler, R. (2003). Virtual labs: A substitute for traditional labs? *The International Journal of Developmental Biology*, 47, 231–236.
- Schmidt-McCormack, J. A., Muniz, M. N., Keuter, E. C., Shaw, S. K., & Cole, R. S. (2017). Design and implementation of instructional videos for upper-division undergraduate laboratory courses. *Chemistry Education Research and Practice*, 18, 749–762.

- Son, J. Y., Narguizian, P., Beltz, D., & Desharnais, R. A. (2016). Comparing physical, virtual, and hybrid flipped labs for general education biology. *Online. Learning*, 20(3), 228–243. <https://doi.org/10.24059/olj.v20i3.687>
- Stieff, M., Werner, S. M., Fink, B., & Meador, D. (2018). Online prelaboratory videos improve student performance in the general chemistry laboratory. *Journal of Chemical Education*, 95, 1260–1266. <https://doi.org/10.1021/acs.jchemed.8b00109>
- Sutadji, E., Susilo, H., Wibawa, A. P., Jabari, N. A. M., & Rohmad, S. N. (2021). Adaptation strategy of authentic assessment in online learning during the covid-19 pandemic. *Journal of Physics: Conference Series*, 1810, 012059.
- Woelk, K., & Whitefield, P. D. (2020). As Close as it might get to the real lab experience live-streamed laboratory activities. *Journal of Chemical Education*, 97, 2996–3001.



27

'Still Learning Together': The Way YouTube Videos Helped Arts and Humanities Students during Lockdown

Lucinda Becker

Context

As a professor in the English Literature department at the University of Reading, I am used to close and regular contact with students; as the author of many study skills guides, I am also familiar with the challenges of 'teaching' the readers of my books. Learning within this discipline at my university relies heavily on two modes of teaching: large weekly lectures, to offer both breadth and specialism to students, alongside two or more weekly small group seminars, allowing students more agency to set the learning agenda and try out new ideas and explore untried intellectual avenues.

These three learning spaces (between the covers of books, in large lecture halls and in small groups) make up the recognisable, formal part of my teaching. Prior to lockdown I had not had to make a conscious choice to consider the other learning that takes place, what is sometimes termed

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the ‘hidden curriculum’. Cobanoglu and Demir (2014) referring to elementary education, show this hidden curriculum in a way that is particularly relevant to this project.

They identify four criteria to define the hidden curriculum; the activity must include:

1. A non-academic focus on skills and learning outside the official (and thus visible) curriculum.
2. The potential to influence students, positively or negatively.
3. Hidden (consciously or not) from some groups, visible only to some individuals.
4. Not written down and not explicitly acknowledged.

This is the vital learning that takes place outside the formal spaces and exists in a space that is far less easy to spot and prise open.

The ‘hidden curriculum’ as discussed by Pownall et al. (2022), defined as including shared institutional values and norms, is also supported when students are encouraged to access material produced specifically for them and their fellow students by their institution.

The Problem

This chapter is concerned with this liminal learning space, the learning that I had not especially noticed prior to the COVID-19 pandemic. In my department at the University of Reading, lockdown represented missed opportunities to talk to students in the corridor, to answer questions in passing and to show that teaching is not simply a discrete act of transmission at an appointed time: it is the very basis of a relationship.

At the end of March 2020, when my university relinquished teaching on campus, the vast majority of my subject teaching was complete for the academic year. However, I found myself feeling keenly the lack of connection with students and the sense of unfinished learning conversations. That was the liminal learning space: the learning that my students were achieving that is not directly subject related but that feeds into all of their learning.

This learning is not particularly subject based, and nor does it seem very important each time it happens. It covers what seem like minor queries ('How do I rehearse for a presentation?' 'Why is a semi-colon so difficult to get right?' 'What should I do with my huge reading list?'). However, the cumulative effect of such conversations, whilst rarely explicitly explored or acknowledged, is significant. It is that part of 'learning to learn' which all educators value, part of what Bao (2020) identifies as the 'offline self-learning' which can be supported by online prompts and support. It benefits all students, not just those who take the active step of asking for study advisors to support their learning.

Often this teaching takes place in brief conversations in seminars or passing moments in a corridor; it may be part of feedback sessions on assignments or as a result of the general chat that happens whilst we wait for others to appear at a learning event. The similarity between these examples is that they all tend to rely on a physical, rather than an online, learning space. They also tend to happen spontaneously, without conscious planning on the part of either academic or student. In the context of learning development, this ad hoc, student-led interaction sits comfortably within the research carried out by Gravett (2019), who took a 'rhizomatic' approach to data collection and analysis. This involved recognising that the motivation for student engagement, and the response to learning, is not linear (like a plant bulb, with roots down and leaf shoots up) but is more diffuse and richer than that (like a plant rhizome, with multiple root growths and leaf shoots) reflecting, as she puts it, 'the importance of multiplicities, singularities, and fluid connections' (Gravett, 2019, p. 4).

Project Aims

The task, then, was clear: to produce some valid replication of this learning experience within the online world, and to create material that was easily accessible and relevant to a wide range of recipients. My own teaching expertise is broad enough for me to be aware of valuable learning moments across a wide range of areas, and my previous experience in producing screencasts for students (as part of a university project I

co-founded) led me to turn to screencasting (Becker et al., 2018; Becker, 2019).

By ‘screencasting’ in this context I mean the creation of short Prezi presentations recorded with a voiceover to produce easily accessible online material for students. I have used these in the past in several ways:

1. To give three-minute overviews of modules to help students make their module choices.
2. To instruct students in mastering points of grammar.
3. To explore with students some key Shakespearean speeches.
4. To describe learning opportunities available to students, such as academic placements.

As part of this earlier screencasting project, I co-lead a team in creating university-wide resources for staff interested in making screencasts for students (<https://blogs.reading.ac.uk/grass/>). This type of activity seems fairly much ‘business as usual’ post-pandemic but represented a significant stride forward when we launched that project in 2014.

Phase One of the Project

I created a series of screencasts and lodged them on a YouTube channel I had registered entitled ‘Still Learning Together’ (https://www.youtube.com/channel/UC3We0ibTxw_plzlO1P2JcgQ). Two or three YouTube clips were released each week from the end of the Spring Term 2020 (timed to encourage students to feel part of a community despite the sudden lockdown) and students on all our programmes were alerted via email and our VLE. In line with our university’s Principles of Partnership, students were encouraged to suggest topics for screencasts, helping to foster a productive online learning community (Becker, 2017).

None of the materials described within this project have been professionally edited: maybe the human feel identified by students in their survey comments (shown later in this chapter) is created by the fact that the material is borne of enthusiasm rather more than polish. In the creation of future screencasts, the guidance offered by Brame in the useful article

'Making Effective Educational Videos' will be of value, especially in the points she makes about using screencasting to promote active learning (Brame, 2016).

This was a small-scale project which has nevertheless had noteworthy implications for online teaching and learning during this academic year. Initially 11 screencasts were produced, and they were deliberately 'hand-crafted'; that is, they did not follow our university guidelines on branding; indeed, they did not even include our university crest or strapline. The aim was to make them akin to clips that students might usually see on YouTube, with a human feel rather than being slick and polished. Slight imperfections, such as speech stumbles, were not edited out, for example. My aim was to make the screencasts feel accessible and personal: a lecturer they knew connecting with them online, trying to relocate that liminal learning space.

The screencasts ranged from two minutes to nine minutes in duration, covering areas that I rarely planned to teach as part of formal sessions, but which I realised I do teach each year in some form:

- Still Learning Together: Four steps to semi-colons.
- Still Learning Together: Six things you need not include in your essay.
- Still Learning Together: Five ways to conquer reading lists.
- Still Learning Together: Six steps to calmness.
- Still Learning Together: Three fixes for a comma splice.
- Still Learning Together: Four thoughts on primary and secondary sources.
- Still Learning Together: Six rehearsals for a great presentation.
- Still Learning Together: Seven fixes for writer's block.
- Still Learning Together: Ten things at the start of an exam.
- Still Learning Together: Five memory techniques.
- Still Learning Together: Eight things we do not need in an unseen exam answer.

As is obvious from the list, each screencast was themed under 'Still Learning Together' to promote the sense of connection that I wanted to foster, and each screencast included a logo of a group of hands being held, to give a visual reminder of us working together. Each screencast was

created using a Prezi design template with a voiceover, which was recorded using Camtasia and uploaded to the channel. By including a number in the title of each screencast, viewers were given an overview of the learning experience. The aforementioned list is in chronological order of release, with the first four being on topics I wanted to cover; the remainder were made at the suggestions of students, which created partnership in the project.

Evaluation of Phase One

Empirical data drawn from YouTube were used to make a quantitative evaluation of the project. The channel has had over 1000 hits, with 36 subscribers on YouTube. The material has, since July 2020, been circulated widely to colleagues and uploaded to our Virtual Learning Environment (VLE) in various places, but as no track was kept of this dispersal of the resource, it is not possible to use the learning analytics on our VLE to gauge impact through viewer numbers or viewing duration.

The screencasts have also been downloaded and shared, which has made it impossible to gauge their reach beyond this initial YouTube success, although there is anecdotal evidence of success which can be drawn from students expressing their appreciation or suggesting topics for inclusion in the series (as noted earlier).

Impact of Phase One

Beyond the impact demonstrated by YouTube views and subscribers, there was also an impact on my individual relationships with students. I found that students whom I was not teaching in a module nevertheless found me once we were back on campus, sharing queries and concerns about their studying. They had approached me, they said, because they felt that they knew me from the screencasts. There was a similar effect in my module classes, where students whom I had not met before felt that they knew me regardless, and this was particularly valuable for those

students with whom I worked in the Spring Term in an online-only learning world.

The immediate impact also went beyond my university. Some of the screencasts were sent to local schools and colleges to help with the challenges of home schooling; the screencasts on grammar were especially well received. They were also lodged on a department outreach site designed specifically to provide teaching and learning materials to schools and colleges. This minor act of sharing has helped to foster our growing relationship with some of these institutions. Within my university, I was able to reflect upon the project on our online 'Teaching and Learning Exchange', whilst within my school the project raised awareness of the importance of thinking through our online learning tool kit. As a result of this I produced an online resource bank with material to help us all navigate the online learning environment more effectively. For a relatively small-scale project, the immediate impact was wider than might have been expected.

Phase Two of the Project

As a result of the success of Phase One, and aware that students were likely to be faced with the challenges of some online learning on their return to studying in Autumn 2020, I created three new screencasts for the YouTube channel:

- Still Learning Together: Ten things to do before an online learning session.
- Still Learning Together: Ten things to do during an online learning session.
- Still Learning Together: Ten things to do after an online learning session.

These screencasts were branded as part of the series, to encourage students to explore other screencasts on the channel, and were also defined as a group by all of them featuring ten points. Students were told, again

by email and our VLE, that these existed, but academic tutors were also sent the MP4 files so that they could share the screencasts with their tutees.

Phase Three of the Project

Pandemic events overtook the project prior to an evaluation of Phase Two, as academics were required to produce all lectures online, so I made the decision to press ahead with creating online lecture screencasts and then evaluate student responses to these, alongside gathering their views on instructional/supportive screencasts more generally.

Several colleagues joined me in creating new types of lectures for a Shakespeare module delivered to our Part 2 (second year) students. Our university was stressing the efficacy of a series of shorter ‘online chunks’ of material as opposed to simply recording hour-long lectures, but the screencasting project gave us pause for thought. Rather than simply recording all of our existing hour-long lectures as three or four shorter screencasts, we took time to consider what we were trying to achieve.

We created short (15–20 minutes) lecture screencasts of three types:

1. Factual lectures, such as ‘text, plot and genre’ screencasts, grounding a student in a play. We saw these as reassuring lectures.
2. ‘How to study’ guides for the module, helping students navigate different approaches and offering practical advice and guidance. We saw these as confidence-boosting lectures.
3. ‘Springboard’ screencasts that were deliberately light on factual information, but instead relied on a question, some answers to which were explored in the screencasts, very much with the idea of challenging students to consider other potential answers (and, of course, other potential questions).

These springboard lectures helped us move students away from lectures that require no more than listening and notetaking, into a more active intellectual area in which they feel challenged to respond (Bovill, 2017). As they are a new way of lecturing on this module, I was relieved

to see students single them out for praise in the mid-module evaluations, as shown in these quotations:

- The springboard lectures are very good at inspiring new ideas to explore within the texts.
- Finding new angles on plays that I hadn't thought of before.
- Lectures are very good. I like the question (springboard) lectures. It feels adapted to online format well.

Evaluation of Phases Two and Three

I was keen to discover how well students were responding to the online material, so I devised a survey investigating students' views on screencasts as a learning tool. The survey on these online resources was carried out over three weeks in February/March 2021; the delay between the creation of the YouTube channel and the survey allowed for both the Still Learning Together series and the newly designed online screencast lectures to be evaluated.

The survey was conducted within our university survey policy and was given ethical approval by the appropriate Director of Teaching and Learning. Students were told that the survey data would be used in two ways: to inform our judgement in designing future online teaching and learning material and to support effective dissemination of the project.

The number of survey respondents (34) represented 10.3% of the survey recipients. The data (both qualitative and quantitative) are thought to be rich enough to be of consequence. Of those respondents, 47% were in Part 2 of their degree course and the majority (74%) were Single Honours students. No personal data questions around age, ethnicity or gender were asked.

Because the screencasts on the YouTube channel were of varying duration, a correlation was expected between duration and views. I was keen to learn whether students were behaving as I anticipated, favouring shorter screencasts. In fact, my assumption was mistaken and this correlation was not seen. Indeed, the two highest rated screencasts in terms of hits were one of the longest, at 9 min 7 sec, and one of the shortest, at

4 min 8 sec. This information was easily seen and did not require specialist software to gather.

This data is borne out by the evidence of the survey, which revealed that only one student would be put off watching a screencast if it were more than three minutes long; whilst 47% of respondents were equally divided in choosing 11 and 15 minutes as the points at which they would agree that ‘this is too long—I don’t have enough time to look at this, or it is not worth my time to go through this now’ (words taken from the survey question). It was fascinating, and unexpected, to find that 26% of respondents chose the response ‘I am not worried about the length of a clip—I watch regardless’, which might allay some of the academic anxiety recently around the duration of online teaching material. Relatively brief might be optimal, but it seems that, from this small survey at least, students are prepared to watch for longer than we might expect.

Students were then asked about the sites they would browse in order to find study skills help and guidance: YouTube came up several times, as would be expected, but so too did our own VLE; The Student Room was also mentioned, suggesting that students may be reaching back to a source they trusted prior to university. Students were also invited to express a preference (on a one- to five-star rating poll) regarding the design and layout of screencasts (Table 27.1).

The screencasts in this project all fell into the median category and this will inform my future design of screencasts, with the aim of moving towards the most popular option of a set of slides with a talking head in the corner of the screen.

Textboxes were included in the survey to allow students to offer qualitative data. This gave a more individualistic but perhaps richer data source for future planning. My reflection on the project had led me to expect

Table 27.1 Average star rating response to a choice of screencast formats

Mode of presentation	Average star rating
Talking head video with no other visuals	2.21
Slides with voiceover but no talking head	3.21
Slides with talking head in the corner of the screen	4.38

some of the responses, but others were less expected. These responses are shown as direct quotations from the survey (Table 27.2).

Upon reflection I realised that, of the comments that did not surprise me (left-hand column), the first seven out of eight all relate to the mechanics of producing screencasts—how they look, their layout and visual impact. Only the final comment in this column begins to tip over into a more personal, motivational element—the need to believe that the lecturer is engaged in the material beyond merely reading from a script.

Of the right-hand column comments, those that I had not expected, the first four relate specifically to the motivation of the person making the screencast, whilst quotations 5–8 reflect, perhaps, an anxiety about this form of learning, articulated as a need for reassurance and familiarity. Within this context, it is interesting to note that researchers such as Kahu identify student motivation as a key factor in student engagement and learning, yet here students are seeking out *lecturer* motivation when responding to online material (Kahu, 2013).

What I realised from this survey is that students want a 'human experience', even when they are online. When we make online learning material, our motivation matters to them. They want to know that we are engaged before they are happy to engage fully. They want to recognise our

Table 27.2 Quotations from respondents to survey on screencasting preferences

Comments I had expected	Comments that were less expected
1 Subtitles available	Lecturer's motivation
2 Mixture (in frame) of person delivering content or voiceover/images/text, and interesting graphics/transitions	Slightly entertaining (not just a block of information) and maybe some animation
3 Visual aids/diagrams	Comedy
4 Films and clips	Feels human and personal
5 Bullet points rather than over drawn information	Notes on the screen so you have something to refer back to
6 Clearly stating what is featured so I am not wasting my time for information I don't specifically need	Lecture-like screencasts
7 Something that's colourful as opposed to black and white	Thumbnail showing what format to expect
8 The person speaking is not reading from a 'script'	Coming from a source/channel that I trust/is well-known

passion and be shown that we have made an effort, even to the point of hoping for humour.

This reaction was reflected in the quotations below, taken from mid-module evaluations, in which students were asked to comment specifically on the online screencast lectures that had been produced for them:

- (The online material is) clear, concise, with plenty of bullet points so you don't have to rewind several times to understand.
- Seminars are great, her enthusiasm and love for the topic makes her seminars much more enjoyable than other lecturers I have had who are clearly reading from slides and are waiting for the lecture to be over with.
- Engaging lectures that aren't too long but are very informative.

No negative comments about online material were received in the evaluations.

Long-term Impact of the Project

The Still Learning Together material clearly benefited personal learning relationships, as students recognised the need in academics to connect with them online outside formal learning events such as lectures and seminars. I built upon this with the introduction of two innovations, again on a Shakespeare module. Over summer 2020, colleagues and I recorded a series of 'In conversation' screencasts, with pairs of academics reminiscing together over performances of Shakespeare's plays that they had seen. Not all of these plays are taught on the module, which gave students the chance to think beyond the set texts, and colleagues were asked not to make the sessions too lecture-like, but rather to try to capture an informal sharing of impressions between informed playgoers.

Several of the colleagues who produced these 'In conversation' recording for our students did not actually teach Shakespeare; it was good to give them the chance to become involved in the module in this way. I was also pleased to find that students now want to join in with this project, and plan to record themselves in conversation about productions and

films of Shakespeare's works, for the benefit of their fellow students now and in the future. This seems to me to be an online democratisation of education that is to be welcomed.

I have also introduced online recorded play reading sessions with students. Each recording lasts an hour or so and, each week, we turn to a new play; three students volunteer to read the play, speech by speech, without rehearsal. The recordings are then held on our VLE and are also available for students to download. This idea arose from a realisation that what students seemed to value in the Still Learning Together project was the personal element. There is plenty of study advice online, but a screen-cast from your own lecturer seems to be welcome. Similarly, whilst there are excellent professional recordings of play readings available online, students told me that having their fellow students reading the plays made them feel more familiar and accessible, given that they heard those voices each week and, on occasion, they were listening back to their own voices if they were that week's readers. This links in well to the 'production effect', with its idea that reading aloud and/or hearing information can improve memory and later recall (MacLeod et al., 2010).

Looking ahead, whilst the Higher Education sector as a whole will be considering how best to navigate the pandemic and post-pandemic world of learning, there will, hopefully, be space for individuals and groups of educators to ensure that some of the benefits of online teaching are not lost. For example, the screencasts on the Still Learning Together channel, alongside the newly designed lecture formats discussed here, would provide excellent material for flipped learning live lectures in future, whilst innovations such as play recordings can still be produced online as long as timetables allow space for online activities such as these.

Perhaps the major impact of projects such as this is that students now have the chance to make fair comparison between modes of learning—they like some aspects of online teaching, such as these screencasts. They do not necessarily want to abandon all online learning, and their responses to the blended approach that may arise in 2021–2022 will be fascinating to follow.

The long-term impact of this project on my pedagogical outlook has been deeper than I would have expected. This work has largely erased my 'I must tell every student everything, right now' anxiety, an anxiety which

I suspect I share with many other academics. Online material has given me the chance to be responsive to immediate need whilst producing a long-lasting, and growing, bank of material. The immediacy and flexibility of our learning lives online has changed the way I will teach, and the many ways in which my students will learn. Whilst the pandemic will pass, some of the positive changes within the higher education learning community will, I hope, be cherished and protected.

References

- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behaviour and Emerging Technologies*, 2(2), 113–115.
- Becker, L. (2017). Creating a learning community on seasteads. In V. Tiberius (Ed.), *Seasteads: Opportunities and challenges for small new societies* (pp. 221–230). vdf Hochschulverlag.
- Becker, L. (2019). Student screencasts within a learning partnership. *Student Engagement in Higher Education Journal*, 2(2), 133–140.
- Becker, L., Collier, J., & Setter, J. (2018). Students as change partners in the School of English Language and Literature at the University of Reading. *The Journal of Educational Innovation, Partnership and Change*, 4(1). <https://doi.org/10.21100/jeipc.v4i1.712>
- Bovill, C. (2017). A framework to explore roles within student-staff partnerships in higher education: Which students are partners, when, and in what ways? *International Journal for Students as Partners*, 1(1). <https://doi.org/10.15173/ijasp.v1i1.3062>
- Brame, C. (2016). Effective educational videos: Principles and guidelines for maximizing student learning from video content. *CBE—Life Sciences Education*, 15(4). <https://doi.org/10.1187/cbe.16-03-0125>
- Cobanoglu, R., & Demir, C. (2014). The visible side of the hidden curriculum in schools (Okullardaki Örtük Programın Görünen Kısmı). *Elementary Education Online*, 13, 776–786.
- Gravett, K. (2019). Story completion: Storying as a method of meaning-making and discursive discovery. *International Journal of Qualitative Methods*, 18. <https://doi.org/10.1177/1609406919893155>
- Kahu, E. (2013). Framing student engagement in higher education. *Studies in Higher Education*, 38(5), 758–773.

- MacLeod, C., Gopie, N., Hourihan, K., Neary, K., & Ozubko, J. (2010). The production effect: Delineation of a phenomenon. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36(3), 671–685.
- Pownall, M., Harris, R., & Blundell-Birtill, P. (2022). Supporting students during the transition to university in COVID-19: Five key considerations and recommendations for educators. *Psychology Learning & Teaching*, 21(1), 3–18.
- Principles of Partnership. [http://www.reading.ac.uk/web/files/cqsd/Principles_of_Partnership_postcard_\(Jan_2019\).pdf](http://www.reading.ac.uk/web/files/cqsd/Principles_of_Partnership_postcard_(Jan_2019).pdf)
- YouTube channel. https://www.youtube.com/channel/UC3We0ibTxw_plzlO1P2JcgQ



28

The Past Informing the Future: Learning Logs in Online Education

Tejal Fatania, Jane Andrews, and Robin Clark

Introduction

Learning logs have been used by a number of academic disciplines over the years (Braun & Thomas, 2013). Whilst learning logs have been utilised in online learning (e.g. Khlaisang & Koraneekij, 2012), this case study specifically focuses upon the utilisation of learning logs as part of online learning provision during a crisis. The COVID-19 pandemic resulted in the urgent need to rapidly move to online learning for a people management module, which was hitherto delivered face to face in the UK and internationally. The people management module, which is delivered on several WMG Master's programmes, was redeveloped, utilising a flipped approach to learning (Reidsma et al., 2017). Learning logs were a key component of the online version, introduced in order promote reflection and deep learning. This chapter focuses upon the results of a study which examined the utilisation of learning logs as a component of the

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online people management module. Whilst reflection was poor, there was evidence of critical thinking and deeper learning, but not as expected. This chapter begins with an outline of the background and context, along with the learning log literature, before moving onto the study methodology, findings and learning for the future.

The People Management Module at WMG

WMG (formerly known as Warwick Manufacturing Group) is one of the largest academic departments of the University of Warwick with an international reputation for collaboration between academia and the public and private sectors (WMG, 2021). WMG has a range of master's degree courses, each with a number of constituent modules. The WMG people management module is one of the largest postgraduate modules provided by the department and is delivered on several MSc courses to around nine hundred students in the UK and overseas every academic year. The module is taught to a diverse student body and primarily to international students for whom English is a second language.

The people management module was rapidly redeveloped in order to be delivered online in the midst of the COVID-19 pandemic during the spring of 2020 (Fatania, 2020). The module was previously delivered exclusively on a face-to-face basis globally and therefore the transition, in a very short time frame (two months), proved to be extremely challenging. Universities across the globe have all faced a similar challenge (Rapanta et al., 2020). COVID-19 constituted an exogenous shock which resulted in institutional change (Greif & Laitin, 2004) requiring WMG, amongst other things, to transform active campus-based teaching into remote teaching that, as much as possible, captured the WMG teaching philosophy (Quezada et al., 2020). The uniqueness of the situation was immediacy whilst at the same time maintaining academic standards. The COVID-19 lockdown, during the spring of 2020, tested WMG collegiality but resulted in staff working synergistically with various internal teams in order to design and deliver online modules rapidly.

The design of the online version of the people management module had a number of key design principles (in line with the face-to-face

version), including student focus and engagement, interactivity and deep learning (Biggs, 2003). As a postgraduate module, deep learning and critical analysis were crucial and were therefore a central design consideration. As Alexander (2017) contends, ‘when educators engage in thought and planning about the deep understandings and critical analytic abilities they want their students to develop, there is increased likelihood that their students will develop such abilities’ (p. 307). The online version of the module had a flipped learning design. This was an alternative pedagogic approach which involved students being given material before their scheduled classes, with class time being used for deeper discussion with tutors and fellow peers (Advance, 2021). As part of this online module design, learning logs were reimagined in order to help realise deep learning and reflection with respect to the online education provision (Fatania, 2020). Moreover, learning logs were utilised in a unique setting at a critical time.

There were specific learning log design principles including simplicity and straightforwardness in order to promote student engagement and completion. Therefore, the learning log consisted only of three sections, namely, observations about the material; implications of the material; and questions about the material (Fatania, 2020). It was important that whilst providing some structure to student reflection, it was not overly prescriptive in order to promote independent thought and creativity. Students were asked to complete learning logs, after completing the necessary pre-reading and pre-work, as a prelude to online seminars, which enabled tutors to tease out and build upon actual student learning in the subsequent substantive seminar sessions (Fatania, 2020). This made the learning taking place a shared and personal experience for both teachers and students. The learning logs did not form part of the formative or summative assessment process.

Learning Logs and their Use in Education

Learning logs have historically been used in various academic disciplines (Braun & Thomas, 2013) including physics (e.g. Audet et al., 1996), engineering (e.g. Mejia et al., 2014), literature (e.g. Babcock, 2007),

human resources management (e.g. Barclay, 1996) and accounting (e.g. Ballantine & Larres, 2007). They are a tool utilised to engender focused learning and reflection (Commander & Smith, 1996). Learning logs enable engagement (Babcock, 2007), cognitive exploration (Audet et al., 1996), development (Macfarlane, 2001) and the review of material, and aid the overall learning process (Khlaisang & Koraneekij, 2012). Learning logs discern learning as an individual process (Barclay, 1996).

Learning logs vary in terms of detail and complexity (Audet et al., 1996) and exist in a number of different guises ranging from highly structured documents to informal journal entries. Whilst learning logs have traditionally been in paper form (e.g. Babcock, 2007), they can also be electronic (e.g. Khlaisang & Koraneekij, 2012). The main benefit of learning logs is for the learner (Commander & Smith, 1996), such as improved learning about oneself and particular activities (Barclay, 1996). Learning logs can also benefit the tutor too by acting as a record of learning (Braun & Thomas, 2013). Learning logs can help the tutor analyse and understand 'prior states of understanding, underlying thought processes, misconceptions and other factors associated with learning' (Audet et al., 1996, p. 207). Learning logs can help the tutor understand whether deep learning and critical thinking have occurred.

Reflection remains a central component of learning logs. Whilst there have been definitional difficulties (Moon, 2004), reflection is thinking and learning from the actual experience in order to improve practice (Schon, 1983, 1987). Reflection permits the critical examination and evaluation of experiences to advance insight and understanding (Finlay, 2008). Reflection is a deeply personal activity which involves 'the complex relationship between processes of knowledge production and the various context of such processes, as well as the involvement of the knowledge producer' (Alvesson & Skoldberg, 2018, p. 10). The seminal work of Dewey (1933) and Schon (1983) have been instrumental in the development of the understanding of the reflective process and practice. Various established models of reflection exist (e.g. Kolb, 1984; Gibbs, 1988) which may be used. Whilst the utilisation of such models is not a necessary requirement for reflection, they can provide students with greater structure in their individual reflective journey. Whilst reflection and reflexivity have sometimes been used interchangeably, there is a

distinction. The former involves thinking about an experience after an event whereas the latter concerns continual self-awareness (including feelings and motives) and therefore is more dynamic (Finlay, 2008). Both reflection and reflexivity are appropriate in relation to learning log utilisation.

Although learning logs have been utilised in online education (e.g. Khlaisang & Koranekij, 2012), there is greater scope for the wide scale use of learning logs in online education provision as part of a blended learning approach. Learning logs can promote reflection and deeper learning, which, allied with interactive online tools and exercises, can be part of a rich and immersive online student experience. As the utilisation of technology in education continues to increase, raising greater consideration and attention regarding pedagogy and design practice (Masterman, 2020), learning logs can add an important dimension to the online student learning mix.

The Study

This study was on the utilisation and efficacy of learning logs as a key component of the online people management module. The study was necessary in order to understand how learning logs were used as part of an online module and in particular, to ascertain reflexivity and deep learning.

Methodology

Following an approach based upon Grounded Theory (Glaser & Strauss, 2017), the authors aimed to undertake a rigorous analysis of the learning logs. This analysis was undertaken systematically so as to achieve a high level descriptive and conceptual ordering from the data. By adopting this approach the authors have been able to closely examine and analyse the data provided within the learning logs. This analysis has resulted in a new conceptual understanding about graduate teaching within the people management sphere.

Ethics, Validity and Reliability

To maintain total anonymity and objectivity the data was extracted from the learning logs and anonymised prior to the researchers beginning the analysis. This meant that all identifying features were removed, including student number, name, programme of enrolment and gender. Additionally, module leaders' details in terms of which colleagues taught which cohort were also removed.

It should be noted that the two researchers responsible for conducting the analysis have no professional teaching link with the people management module concerned. Furthermore, the total anonymisation of the raw data and the decision to remove the analysis away from the module teaching team reduced the ethical risk considerably as no individual details were released.

Sampling and Analysis

A total of 267 student learning logs were downloaded and analysed independently by two colleagues using open coding techniques. Using open coding involved a systematic process whereupon concepts were identified and their properties uncovered from the data itself (Strauss & Corbin, 1998). For the two researchers responsible for analysing the data, this meant independently undertaking a constant comparative analysis of each learning log. At this point, with the researchers working alone to conduct a micro-analysis of the written text, data was broken down initially into six distinctive phenomena (three identified by the first researcher and three by the second). In discussing this stage of the sampling and analysis, Strauss and Corbin (1998) argue that the 'first step in theory building is conceptualising [whereby] a concept is labelled as a phenomenon' (p. 103). The labels given to these phenomena are given in the findings section.

From this point, the analysis continued with the two researchers working in tandem. Using a process of axial coding, the data was reduced to three distinctive categories. This two-stage process enabled a rigorous and scientific analytical process in which internal and external validity was

central. In discussing the benefits of the categorisation of qualitative data Strauss and Corbin (1998) argue that ‘categories are concepts, derived from data, that stand for phenomena’. They answer the question ‘what is going on here? They depict the problems, issues, concerns and matters that are important to those being studied’ (p. 114).

The Data Findings

Undertaking a micro-analysis, six distinctive phenomena emerged:

1. Reflections on individual learning
2. Personal commentary about the module
3. Thoughts about the teaching approach
4. Perceptions of the level of study
5. Students’ perceptions of what needed to be included in future module content
6. Ideas about the future of business and education

The two researchers then worked together, jointly comparing and contrasting data within each phenomenon using a process of axial coding. Axial coding is defined by Glaser and Strauss (1998) as ‘the process of reassembling data that were fractured during open coding ... to form more precise and complete explanations about phenomena’ (p. 124). Axial coding and conceptual ordering resulted in the number of categories being reduced from six to three:

1. Individual reflections: Learning and Life
2. Students’ perceptions of Pedagogic Practice
3. Future Teaching Direction and Module Content

Individual Reflections: Learning and Life

The learning logs were intended to encourage reflection amongst the students, with a series of questions aimed at prompting deep learning and

engagement with the materials. However, the analysis discovered that only the minority of students grasped what was required in terms of reflection. These students linked learning, work and life, with a number commenting on team and groupwork, both in the classroom and in the workplace:

I think the most relevant situation is the requirement for teamwork in the classroom.

Life and work cannot be separated from the collective. We all need to coordinate and communicate with each other. Personal perception, personality, motivation and emotion reflect and influence our behaviour. We need to adjust and integrate.

The focus on the collaborative nature of work can be applied to classroom relationships and used to ensure achievement of goals.

In group working individual perception, personality, motivation and emotion form people's direction and attitude. Everyone is different. Managing these allows a consistent view of the team.

Other students reflected on how what they had learned during the module made them think about their wider situation in terms of employment:

The knowledge I learned from this course made me more curious about staff structure and how to deal with team relationships.

The idea that trust is a main factor in performance triggered my interest and helped me understand the link between human resource management and organisational performance.

It's important to understand that not everyone learns and adapts at the same pace. ... workers with potential need to be nurtured and harnessed for them to be efficient.

Whereas a small minority of students contextualised the learning materials from their individual ontology and epistemology, critiquing how they behave and considering the implications of this:

I find sometimes I have a problem in stereotyping people. I also sometimes experience the halo effect when I communicate. This means I do not act objectively.

Throughout the module I have learned that people matter most in an organisation. I relate well to intrinsic reward and receive joy and happiness from accomplishing a challenging task.

I have learned that theories are a double-edged sword. They do not apply to all practical situations and can sometimes point to the wrong thing. This makes me being critical and suspicious about theories vital when analysing real situations.

It should be noted that only a minority (less than a fifth) of the students approached the learning logs reflectively, many more used the opportunity to provide descriptive comments on both the teaching approach and the materials.

Student's Perceptions of Pedagogic Practice

Over half of the learning logs discussed the teaching style and materials. Many such comments were positive:

I was intrigued by the content in the material and found it true and highly relevant.

The material provided is concise and easy to follow.

The definition of organisational performance at the beginning of today's lecture was very enlightening to me because it emphasises the management of human resources.

Although many of the students had something positive to say about the materials, inevitably, others were critical about specific aspects of the module content:

Critically defining a person's characteristics within a Personality Type in the Big Five model seems stiff and too general to fit the diversity of human beings. I wonder whether there are any supplemental models.

The article given reviewing performance management is very technical and too complex. I would appreciate another case study.

Taking a broader view, many comments about the course materials tended to be more of a mixture:

There is a lack of some real company case studies. If more companies and cases can be combined to analyse different scenarios it would be more meaningful.

The module made me more curious about organisations and relationships. The materials helped me understand the qualities needed to become a good leader.

Overall, the materials were in line with common sense and some concepts quite self-explanatory. Whilst it is relatively easy to understand the materials, it is difficult to know how to utilise the underlying principles.

Whilst some students expressed difficulties in contextualising the course materials within a 'real-life' setting:

In the process of reading the materials I found some content well understood. Some concepts were more difficult to understand. So many models are introduced, but we were told about this model with no examples to support the application.

I had hoped there would be more real-life examples because I don't have work experience.

Other students found it difficult to make the conceptual and theoretical links between the different materials in the module:

The content on leadership leaves a gap between theory and reality. I don't know how to use the knowledge in practical conditions.

For me the slides are missing the 'so what'. For example, the concept of power is explained but I couldn't find anything practical to take forward.

Given that the logs were written during a period of lockdown indicative of the COVID-19 pandemic, surprisingly no log entries mentioned this. Of those that did so much of the focus was on groupwork in the virtual environment:

The supplementary slides and articles seem to have been designed for the current situation of lockdown where we have had to transfer offline classes to online. It has not been easy to maintain efficient and effective groupwork.

The weakness of virtual teams is that cooperation is difficult with different perspectives, knowledge, talents and expertise. We can still share skills over the internet but need technical guidance.

Future Teaching Direction and Module Content

A handful of students used the learning log to raise a number of questions as suggestions for future study. Of these, two stand out as potentially being suitable to inform future module content:

In the current situation with Covid where we are working or learning from home online there are a number of questions that the module could answer. Is virtual working sustainable for all companies? How can performance evaluation work in an online environment? What measurements can be used to evaluate output?

It would be useful to learn how to evaluate the performance of employees electronically and remotely. How to realise communication between employees in the company remotely. Also, questions like 'will the concept of the office exist in future' and 'will all employees be able to work from home' would be interesting topics.

Forward-facing critical questions were rare within the log entries, the majority of which dealt with more basic pedagogical issues:

More interactive audio and online activities could make us experience different simulations. This would help students remember.

More videos linking theory to practice would help us understand.

Others were more specific in explaining what additions they felt would be useful for future learning:

I would like to learn more about mental models. How to deal with different perspectives in reality.

It would be good to learn about social behaviour and how it can induce a person to change their motivation and even their personality.

It would be good to include how uncertain events, such as Coronavirus, may affect the behaviour of people. What tools could help teams keep motivated working at home?

Discussion

Perhaps the most notable factor to emerge from this short study is the disappointing level of engagement with reflection and reflexivity by the students. Indeed, many of the learning logs comprised simple descriptive recordings of lectures, in which material were at best paraphrased and at worse cited word-for-word. Given the international nature of the cohort, it is perhaps not unreasonable to postulate that being asked to engage in critical reflexive practice was for many an uncomfortable experience (Holmes et al., 2005), particularly as the majority of students were studying in the UK for the first time and were still in the process of making intercultural adjustments (Dai, 2020).

Moving to the first theme emerging out of the data, that of students' reflections of learning and life; a number of comments made related to groupwork within the learning environment. Often perceived negatively by students (Christensen et al., 2019; McKinney & Cook, 2018) the level of maturity shown within the log entries about groupwork took the researchers by surprise. Indeed, the somewhat predictable perspective that groupwork in the classroom can be polarising was more than offset by log entries which emphasised the need for students to work as a collective, taking account of and managing differences whilst building relationships.

The notion of relationship building was extended beyond the classroom by some of the students who successfully linked theories learned in the classroom with management in the workplace. The value of reflective learning in promoting employability (Paterson, 2017) is evidenced by the few students who made the effort to reflect with comments about trust, nurturing colleagues and individual curiosity all linking theory to real-life.

Of those students who attempted to write reflectively, a handful provided a deeper insight into their own psyche with one student admitting that they had a problem with stereotyping and also with the 'halo effect' and another depicting how they positively reacted to intrinsic rewards. A third student gave a more sceptical view, questioning the role of theory in informing real-life decisions. Such different perspectives are not unusual. Many students are susceptible to being overly impressed by those who seem to know or have more than they do (Feldon et al., 2015; Park et al., 2020). Likewise, the influence that stereotyping has on students' judgement and learning experience is also recorded in the literature (Brunsma et al., 2017; Le et al., 2016), as are students' responses to intrinsic rewards (Raza et al., 2018; Williams et al., 2018).

The second theme identified during the analysis, student's perception of pedagogic practice, was far more descriptive than the first. Over half of the students made a comment about the teaching style or materials. Many of these comments were positive, with a number of students indicating that they found the materials relevant, concise and up to date. Not surprisingly, there were also a number of negative comments, with some particular theories or concepts being criticised and many students showing a lack of critical thought or independent learning. Different levels of understanding at graduate level are inevitably indicative of the global classroom whereby students from around the world find themselves learning in an international setting (Boulton, 2019). What was notable about this study was the number of students who seemed unable to link theory to practice within the subject area.

Shifting to the third theme, some of the students provided a series of questions they felt could contribute to the discussions made in the classroom. The benefits of co-construction and co-creation of the higher education curriculum are recorded in the literature (Dollinger et al., 2018; Kilgour et al., 2020). In the context of the paradigm shift caused by

COVID-19, in terms of the sudden and mass move to online learning (Ammigan et al., 2022; Karakose, 2021), it has potentially never been quite so important to listen to the student voice. The perceptions outlined in this brief chapter have resulted in a number of changes to the curriculum. These are now outlined in the final section.

Moving Forward: Changing the Curriculum

The online version of the people management module was put together and implemented at breakneck speed in the spring of 2020. Whilst appropriate pedagogical and quality standards were considered and met, it was clear that the online version of the module would need to be tweaked, particularly following student feedback. A number of changes were therefore made to the module in the winter of 2020 and implemented in January 2021.

As stated, it was clearly evident that learning logs were not being used to their full potential. The introductory letter sent to students prior to module commencement, as well as the first seminar, was therefore changed in order to emphasise the role of learning logs and to explain the wider flipped module ethos to students. Furthermore, even though the completion of learning logs was on an individual basis, students were encouraged to liaise with fellow students once they had completed the pre-reading in order to help form a community of practice (Wenger, 2000), which it was hoped would aid learning log reflexivity. The utilisation of learning logs, as part of a flipped learning approach, was novel to students. Furthermore, other modules in the department did not adopt this approach and some students found it difficult to understand why the delivery of this module was different to the other modules on their courses.

The pre-learning materials were changed to make them even more interactive, with greater video clips and exercises. More case studies and examples were also provided to students throughout. This was primarily in order to help student's better link theory to practice. Some seminar content was also altered in order to help students apply the material to real-world situations.

This experience emphasised the importance of student engagement (Kuh, 2003) during course re-design and implementation and also the difficulties of managing change (Burns, 2017) particularly during a crisis (Booth, 1993). Even though the people management module development team clearly appreciated the saliency of communication in managing change as emphasised in the step-based models of change management which they taught (e.g., Beer, 1980; Kotter, 1996), as previously stated, the online version of the people management module was put together very quickly in order to meet business needs and therefore there was limited time for student involvement and consultation. It is clear, however, that despite truncated implementation timescales, that building in appropriate time for this would have made implementation smoother and benefited the student experience. Furthermore, students who had been through the module could have been used as module advocates in order to help with communication to other students who were about to commence the module.

Conclusion

Whilst the levels of reflexivity in the learning logs were certainly disappointing, it is evident that implementation and execution are salient considerations along with pedagogy. In this case, the latter was prioritised over the former, as a way of attempting to bring about a quick change to teaching and learning practices in a crisis situation and promote deep learning. What is evident is the need to properly prepare students such that they understand the learning approaches fully at the outset. Involvement in co-creation would be the next step. In doing this the power of learning logs can be realised in order to achieve critical thinking and deeper learning both academically and in the world beyond the university—in work and in life.

References

- Advance, H. E. (2021). *Flipped learning*. <https://www.advance-he.ac.uk/knowledge-hub/flipped-learning> Accessed 13/01/21.
- Alexander, P. (2017). Reflection and reflexivity in practice versus in theory: Challenges of conceptualization, complexity, and competence. *Educational Psychologist*, 52(4), 307–314.
- Alvesson, M., & Skoldberg, K. (2018). *Reflexive methodology: New vistas for qualitative research*. Sage Publications.
- Ammigan, R., Chan, R., & Bista, K. (2022). The impact of COVID-19 on higher education: Challenges and issues. In R. Ammigan, R. Chan, & K. Bista (Eds.), *COVID-19 and higher education in a global context: Exploring contemporary issues and challenges*. STAR Scholars.
- Audet, R., Hickman, P., & Dobrynina, G. (1996). Learning logs: A classroom practice for enhancing scientific sense making. *Journal of Research in Science Teaching*, 33(2), 205–222.
- Babcock, M. (2007). Learning logs in introductory literature courses. *Teaching in Higher Education*, 12(4), 513–523.
- Ballantine, J., & Larres, P. (2007). Final year accounting undergraduates attitudes to group assessment and the role of learning logs. *Accounting Education*, 16(2), 163–183.
- Barclay, J. (1996). Learning from experience with learning logs. *Journal of Management Development*, 15(6), 28–43.
- Beer, M. (1980). *Organisation change and development: A systems view*. Goodyear.
- Biggs, J. (2003). *Teaching for quality learning at university*. McGraw Hill.
- Booth, S. (1993). *Crisis management strategy*. Routledge.
- Boulton, H. (2019). Crossing boundaries: The affordances of new technologies in supporting a collaborative learning environment for doctoral students learning transnationally. *Technology, Pedagogy and Education*, 28(3), 255–267.
- Braun, S., & Thomas, S. (2013). Student perceptions of the use of learning logs to teach public relations writing. *Procedia—Social and Behavioral Sciences*, 93(2013), 1456–1460.
- Brunsma, D., Embrick, D., & Shin, J. (2017). Graduate students of color: Race, racism, and mentoring in the white waters of academia. *Sociology of Race and Ethnicity*, 3(1), 1–13.
- Burns, B. (2017). *Managing Change*. Pearson Education.

- Christensen, J., Harrison, J., Hollindale, J., & Wood, K. (2019). Implementing team-based learning (TBL) in accounting courses. *Accounting Education*, 28(2), 195–219.
- Commander, N., & Smith, B. (1996). Learning logs: A tool for cognitive monitoring. *Journal of Adolescent and Adult Literacy*, 39(6), 446–453.
- Dai, K. (2020). Learning between two systems: A Chinese student's reflexive narrative in a China-Australia articulation programme. *Compare: A Journal of Comparative and International Education*, 50(3), 371–390.
- Dewey, J. (1933). *How we think*. D. C. Heath.
- Dollinger, M., Lodge, J., & Coates, H. (2018). Co-creation in higher education: Towards a conceptual model. *Journal of Marketing for Higher Education*, 28(2), 210–231.
- Fatania, T. (2020). Case study 4.1. In B. Gibbs & G. Wood (Eds.), *Emerging stronger: Lasting impact from crisis innovation*. Engineering Professors' Council. Retrieved December 8, 2020, from <http://epc.ac.uk/wp-content/uploads/2020/08/Gibbs-Wood-eds-2020-Emerging-Stronger.pdf>
- Feldon, D., Mather, M., Hurst, M., & Timmerman, B. (2015). Faculty mentors', graduate students, and performance-based assessments of students' research skill development. *American Educational Research Journal*, 52(2), 334–370.
- Finlay, L. (2008). *Reflecting on reflective practice*. Practice-based Professional Learning Paper 52. The Open University.
- Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Further Education Unit. Oxford Polytechnic.
- Glaser, B., & Strauss, A. (2017). *Discovery of grounded theory: Strategies for qualitative research*. Routledge.
- Greif, A., & Laitin, D. (2004). A theory of endogenous institutional change. *American Political Science Review*, 98(4), 633–652.
- Holmes, P., Cockburn-Wooten, C., Motion, J., Zorn, T., & Roper, J. (2005). Critical reflexive practice in teaching management communication. *Business Communication Quarterly*, 68(2), 247–256.
- Karakose, T. (2021). The impact of the COVID-19 pandemic on higher education: Opportunities and implications for policy and practice. *Educational Process: International Journal*, 10(1), 7–12.
- Khlaisang, J., & Koraneeekij, P. (2012). Development of blended e-learning model using online interactive reflective learning logs to enhance faculty of education students' inquiring mind and retention at Chulalongkorn

- University. *Proceedings of the International e-Learning Conference, 2012(IEC2012)*.
- Kilgour, P., Northcote, M., Williams, A., & Kilgour, A. (2020). A plan for the co-construction and collaborative use of rubrics for student learning. *Assessment and Evaluation in Higher Education*, 45(1), 140–153.
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
- Kotter, J. (1996). *Leading change*. Harvard Business Press.
- Kuh, G. (2003). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning*, 35(2), 24–32.
- Le, A., LaCost, B., & Wismer, M. (2016). International female graduate Students' experience at a midwestern university: Sense of belonging and identity development. *Journal of International Students*, 6(1), 128–152.
- Macfarlane, B. (2001). Developing reflective students: Evaluating the benefits of learning logs within a business ethics programme. *Teaching Business Ethics*, 4, 375–387.
- Masterman, L. (2020). The challenges of teachers design practice. In H. Beetham & R. Sharpe (Eds.), *Rethinking pedagogy for a digital age: Principles and practices of design*. Routledge.
- McKinney, P., & Cook, C. (2018). Student conceptions of group work: Visual research into LIS student group work using the draw-and-write technique. *Journal of Education for Library and Information Science*, 59(4), 206–227.
- Mejia, J., Goodridge, W., & Green, C. (2014). Using web-based learning logs to analyse students conceptual understanding of truss analysis in an engineering statics course. In *Proceedings of the IEEE Frontiers in Education Conference*.
- Moon, J. (2004). Using reflective learning to improve the impact of short courses and workshops. *The Journal of Continuing Education in the Health Profession*, 24, 4–11.
- Park, K., Kwak, H., Song, H., & Cha, M. (2020). Trust me, I have a Ph. D.: A propensity score analysis on the halo effect of disclosing one's offline social status in online communities. In *Proceedings of the International AAAI Conference on Web and Social Media*.
- Paterson, R. (2017). 'Because sometimes your failures can also teach you certain skills': Lecturer and student perceptions of employability skills at a transnational university. *Qualitative Research in Education*, 6(3), 241–275.

- Quezada, R., Talbot, C., & Quezada-Parker, K. (2020). From bricks and mortar to remote teaching: A teacher education Program's response to COVID-19. *Journal of Education for Teaching: International research and pedagogy*, 26(4).
- Rapanta, C., Botturi, L., Goodyear, P., Guardia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Post digital Science Education.*, 2, 923–945.
- Raza, S., Abidi, M., Arsalan, G., Sharif, A., & Qureshi, M. (2018). The impact of student attitude, trust, subjective norms, motivation and rewards on knowledge sharing attitudes among university students. *International Journal of Knowledge and Learning.*, 12(4), 287–304.
- Reidsma, C., Kavanagh, L., Hadgraft, R., & Smith, N. (2017). *The flipped classroom. Practice and practices in higher education*. Springer.
- Schon, D. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.
- Schon, D. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.
- Strauss, A., & Corbin, J. (1998). *Grounded theory in practice*. Sage Publications.
- Wenger, E. (2000). *Communities of practice: Learning, meaning and identity*. Cambridge University Press.
- Williams, C., Dziurawiec, S., & Heritage, B. (2018). More pain than gain: Effort-reward imbalance, burnout, and withdrawal intentions within a university student population. *Journal of Educational Psychology.*, 110(3), 378.
- WMG. (2021). *Shaping the future*. Retrieved January 4, 2021, from <https://warwick.ac.uk/fac/sci/wmg/>



29

Reading Online during Lockdown: Insights from History and Heritage

Matt East, Leah Warriner-Wood, and Jamie Wood

Introduction

Regardless of discipline, reading is ubiquitous across higher education. Reading is regarded as a critical skill, yet getting students to engage with reading is a challenge faced by academics in all disciplines, with the shift to fully online delivery in 2020 rendering many traditional approaches to developing students' reading capabilities inviable, as in so many other areas of higher education (Mishra et al., 2020). Although research has demonstrated that students' reading strategies shift significantly in online environments, pedagogies for supporting students in reading online—particularly in response to abrupt changes to curriculum delivery—are

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not well developed (Cohn, 2021; Neuwirth et al., 2021). This chapter explores one example of how collaborative online learning supported students in developing their skills in the ‘reading rich’ discipline of History.

Contextual Background

The Module

Making Militants is a research-led final-year undergraduate module in the School of History and Heritage at the University of Lincoln (UK), where active pedagogies for online reading have been developed since 2018 (Wood et al., 2022). Its first iteration was in 2018–19, meaning that 2020–21 was the third time the module had run, but the first as a blended learning course. Seventeen students took the module in 2020–21. Table 29.1 summarises the delivery structure of the module. Prior to lockdown, in November 2020, the students were divided into two sub-groups, each of which alternated between a synchronous, on-campus two-hour seminar and an asynchronous, online version. During lockdown, the 17 students formed one seminar group. For this group, a one-hour synchronous session was accompanied by asynchronous activities (the equivalent of 1 hour), each of which made extensive use of Microsoft Office 365 documents (‘shared documents’) hosted on the institution’s cloud server, and editable by students ‘live’, via a shared link. Shared

Table 29.1 Module delivery structure (2020–21)

Delivery mode	No. of students	Frequency
On-campus face-to-face seminars (2 hours)	½ of group	Alternate weeks (pre-lockdown)
Asynchronous online activities (2 hours)	½ of group	Alternate weeks (pre-lockdown)
Synchronous online seminars (1 hour)	Whole group	Weekly (lockdown)
Asynchronous online activities (1 hour)	Whole group	Weekly (lockdown)
Talis Elevate annotation (homework reading)	Whole group	Throughout

documents therefore played a role primarily within the ‘classroom’ setting (or online synchronous/asynchronous equivalent), while Talis Elevate was used primarily for engaging students in independent preparatory reading. Critically, the ‘traditional lecture’ approach was not a part of this module. Students were expected to work collaboratively through the natural cadence of the weekly module activity.

Technology

Talis Elevate is a collaborative annotation tool that facilitates in-resources discussion of text, images, audio and video by students. It also enables students to make private notes on resources, and provides engagement analytics for both staff and students, including data on resource usage and individual student activity. Talis Elevate has been used to support ‘close reading’ and pre-seminar discussion in the School of History and Heritage for four years and, since the pandemic, has become a core tool for supporting students in engaging with reading through social annotation (Zhu et al., [2020](#)).

Pedagogy and Assessment

Making Militants is assessed through participation marks (the rubric for which explicitly rewards active engagement in online spaces/activities: 15%), an exercise requiring the students to devise and justify their choice of a research question (15%), and a research essay addressing that question (70%). Each element of the assessment is intended to build cumulatively on the others so that students’ comments on Elevate and shared documents gradually focus on their own evolving research interests.

Reading and annotation have been hard-wired into the module since its inception. In its first two iterations, in addition to using Talis Elevate to support preparatory reading activity, students would engage in collaborative close readings of primary sources in class, using handouts and whiteboards, with the tutor projecting texts at the front of the class. In 2020–21, in on-campus seminars (pre-lockdown), students accessed

activities and readings via shared MS Office 365 documents, which were projected onto the whiteboard and which they could access on their personal devices. The online sub-group engaged in asynchronous online tasks that replicated classroom activities as far as possible (reading and commenting on primary sources on shared documents, mini-lectures, polls, answering questions via surveys). During lockdown, students were asked to engage in similar kinds of commenting activities during synchronous online seminars and when completing asynchronous tasks. Blackboard Collaborate Ultra was used to run the synchronous sessions.

Talis Elevate supported student engagement in preparatory reading activities ('homework') as it had done since the first iteration of the module. Minimal direction was given to students for engaging with Elevate—they were asked to post at least three comments (e.g. questions, points of interest, things that they didn't understand, connections to other weeks, responding to the comments of their peers) on the set reading each week. The tutor read the comments and used them to inform planning of learning activities but rarely replied. Elevate thus remained a student space which, together with the open nature of the task, led to high levels of engagement with these activities. Over the course of the module, 15 students (88% of the cohort) made a total of 524 annotations in Talis Elevate, across 16 resources (average: 31 per student).

Research Design and Methodology

A phenomenological, mixed-methods approach was taken to investigate the impact of collaborative online reading activity on students' learning during the period of COVID-19 lockdown in the UK. A combination of a survey, interviews and observation of behaviour when reading online was triangulated in order to gain multiple perspectives on student practices. In addition, Talis Elevate analytics data and module assessments were used to define a 'taxonomy of student personae'. In total, five students responded to the survey, and two were interviewed. Although the overall number of student respondents was low, we judge that the varied methods of collection, combined with the richness of the data gathered provides reliable insights into the how students—in general—read online on the module.

Ethics

The project received ethical approval from the University of Lincoln. Students were given the opportunity to opt in when filling in the survey and being interviewed, and to opt out from the research at any point in the study. Survey data were anonymised at point of creation, while those conducting the interviews had not been involved in the teaching of the module. The academic leading the module had no involvement in the analysis of the survey or the interviews, both of which took place after all assessment had been completed on the module. Demographic data were not collected, to preserve anonymity among a small cohort.

Student Personae

The response rate to the student survey was 29%, while the two interviewees represented 11% of the original cohort. Both students interviewed—henceforth referred to as ‘Student A’ and ‘Student B’—can be categorised as ‘high achievers’, scoring in the top 10% of the module assessment, and typically playing an active role in class. Although we originally intended to interview a more representative sample, those in the lower engagement quartile did not respond to interview requests. Further investigation could focus on less-engaged students in order to better understand the experiences of a broader spectrum of student readers. This may, for example, highlight reading behaviour inequalities among higher education students, of the type identified by Reimer et al among school learners in Denmark (Reimer et al., 2021). Interestingly, both Students A and B revealed, in the process of the interviews, their strong desires to become secondary school teachers, evidencing their passion for education and learning, a factor which may have impacted their engagement on the module and with our research. Despite these similarities, Students A and B have had quite different university experiences. Student B, a ‘commuter student’, had limited on-campus experience at Lincoln because they transferred in second year from another institution. This resulted, due to the pandemic, in a predominantly online/blended experience, while Student A had a more traditional experience, attending

this University from their first year, and being primarily campus-based prior to the pandemic. In Talis Elevate, both students annotated considerably more than the average over the course of the module (A: 59; B: 45; avg.: 31). Interestingly, A spent fewer total ‘active’ minutes in Elevate than the average, while B spent more time in the tool (A: 254 min; B: 355 min; avg.: 317 min).

Findings

This section draws on quantitative data and interviews to explore three key themes, focussing on the practice of reading and annotating resources, the perceived value of collaborative activity for students, and students’ approaches to completing assessment tasks.

Reading and Annotating

The survey indicated that students had minimal experience of engaging in collaborative online reading before they started the module, although two reported prior use of Talis Elevate. Student use of shared documents focussed on responding to tutor questions, annotating specific extracts, and responding to or querying peer contributions. Table 29.2 shows a significant increase in average annotations per student in 2020–21 compared to previous iterations of the module. In suggesting that students engaged more with online reading in 2020–21, this aligns with other research showing that online reading behaviours were positively influenced by COVID-19 lockdown (Adeyemi, 2021; Reimer et al., 2021).

Table 29.2 Level of annotations and replies per year

Academic Year	Students	Comments	Replies	Total (comments + replies)	% Replies	Ave. annotations per student
2018–19	24	455	20	475	4.2	20
2019–20	43	1061	28	1089	2.6	25
2020–21	17	411	113	524	21.6	31

Survey respondents reported that reading activity focused on Talis Elevate and shared documents, with only two making use of physical books. All students rated the importance of reading highly (mean score 9.2/10), with 4 out of 5 linking it to their learning in free-text responses. Reading was recognised as essential for individual comprehension and knowledge-building, but it was also related to seminar participation. Collaboration, sharing and generating/building ideas through interaction were cited as drivers for engagement with reading in online and physical spaces on campus:

It [Talis Elevate] helped as a convenient place for notes and was good for class collaboration and sharing/building of ideas.

This [shared document] was really useful due to social distancing as it meant we could all display our contributions without actually sharing pens/writing equipment. This was also useful when we moved online as we could all contribute together despite being at home.

Almost all students in the survey reported engaging with the annotations of others (i.e. the outputs of their peers' reading) to help them to understand topics and sources, and to prompt their own learning:

It [shared document] was a useful way to display everyone's thoughts. Since a whiteboard in a room isn't available, it was a useful alternative for compiling all these thoughts and letting people use those thoughts to generate ideas for assessments / class discussion.

One student noted that reading was valued as a means of developing 'research skills and independence'.

Interviewees were also asked to reflect on their independent reading. Both reported that they tended to do reading tasks at the start of the week, ahead of many of their peers. Student A skim-read sources to get an overview of unfamiliar topics before reading them in more detail, typically spending two hours per week on reading, and preferred reading primary sources because they were shorter and thus less daunting and easier to digest. Reading also helped them to identify a topic for their research essay.

Survey respondents used Talis Elevate in a more diverse manner than shared documents: one student reported limiting their engagement to ‘agreeing’ with their peers (i.e. using an ‘thumbs up’ emoticon) or anonymous commenting, while others said that they highlighted key elements of texts and built on points raised by their peers. Students generally engaged in such activity to prepare for class and deepen understanding, also mentioning that it supported peer interaction, independent study, and assessment planning.

Students engaged with the annotations of their peers extensively, with 100% of survey respondents noting that their peers’ contributions informed their own independent learning and knowledge construction. Respondents were unanimous in valuing the contributions of others, which they reported as helping to shape their own learning by bringing different perspectives/interpretations to the fore and highlighting misunderstandings. This aligns with student feedback on previous iterations of the module.

Interviewees recognised that annotation activity undertaken in advance of synchronous tasks deepened learning by developing subject knowledge and raising awareness of peers’ interpretations. They also noted that alignment between annotation and in-class discussion motivated them to contribute further and felt that it played a role in motivating their peers. Student A perceived that most of the cohort engaged with annotation tasks in a ‘flurry’ just before the seminar. This is supported by Talis Elevate data (Fig. 29.1) and was viewed positively by Student A, who was thus able to read the comments of peers shortly before a synchronous seminar, enabling them to draw on a range of different interpretations of the material.

Interacting and Collaborating

Student A thought that collaboration was at the heart of all activity undertaken on the module, although they felt that it took the cohort a couple of weeks to ‘warm into’ collaborative activities. They thought this was partly because the collaborative nature of the module was not necessarily familiar, although it is interesting to note (Fig. 29.2) that the scale

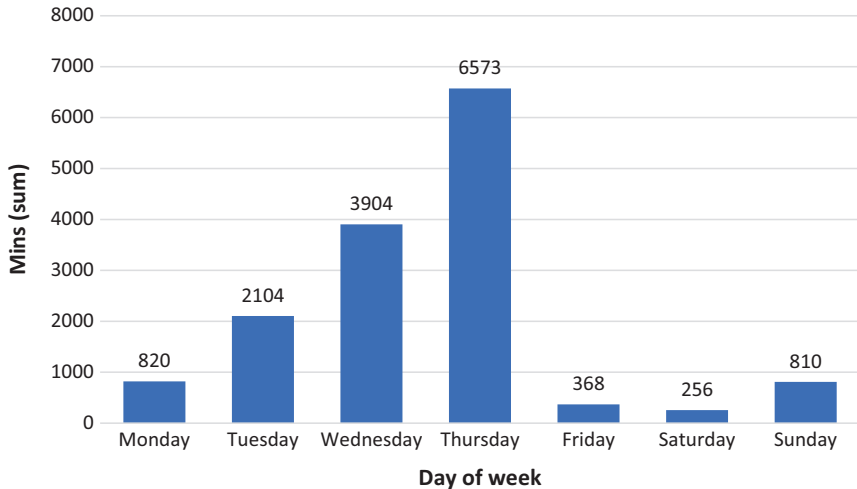


Fig. 29.1 Total student engagement (minutes) vs. day of the week over the course of the Making Militants module (2018–19 iteration, when in-person seminars were on Thursday afternoons)

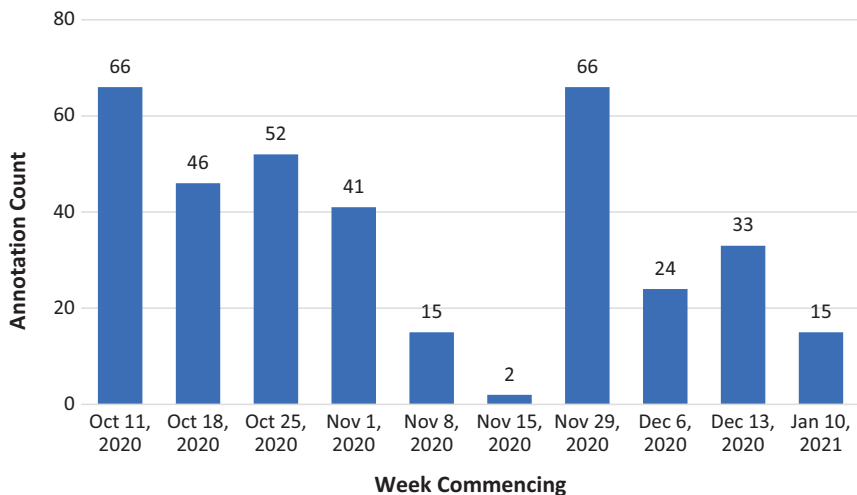


Fig. 29.2 Number of annotations plotted vs. teaching week over the course of the Making Militants module (2020–21 iteration)

of annotation peaked at the start of the module and immediately after the reading week, suggesting that students' engagement was relatively high throughout and dropped later as assessments were due. Student A stressed that the module leader played a key role in developing student engagement by ensuring that students understood how collaborative activities aligned with the assessments.

Survey results indicate that Talis Elevate was seen as a useful platform for interacting and collaborating with other students. Two respondents specifically mentioned engaging with others' comments to develop their comprehension of topics when they perceived that they were 'struggling' with a source or theme. Some students felt that work on shared documents had a critical impact on their ability to engage in collaborative learning on the module, while others thought that it did not play a particularly meaningful role. Although there was a general recognition that shared documents could not replace face-to-face interaction entirely, it was recognised that they facilitated engagement in learning when students were unable to attend campus. About 80% respondents found the contributions of their peers valuable later in the semester:

It was not as intuitive as Talis [Elevate], but it still helped to simulate the kind of discussions and collaboration we had in the in-person seminars. Was also useful to come back to when planning the assessments.

Collaborative activity was also connected to assessment by interviewees. For Students A and B, the main value of collaboration on this module was how it enabled them to validate and diversify their knowledge of the subject matter: the contributions of peers helped to expand students' initial interpretations and provided useful points of reference when writing assignments.

Students seemed, in the main, to understand 'interaction' in Talis Elevate as *reading* rather than replying to or 'agreeing' with others' comments. Survey respondents expressed no concerns about peers reading their annotations, characterising such interaction as a means of supporting one another's comprehension and learning. One student likened the availability of others' annotations to a classroom-based learning environment.

However, one of the interviewees commented that, although they found it useful to read others' comments, interaction between students (which they characterised as replies to comments) was less common, possibly due to a lack of confidence. Research by Adeyemi (2021) and Neuwirth et al. (2021) has highlighted other hindrances to reading online, including respectively: resource availability and distraction (e.g. by social media); and lack of student training in skills for effective virtual learning (for instance online etiquette). Such variables warrant further investigation within the context of higher education reading in the UK.

When we reviewed usage data and observed interactions within the tool, it was clear that students were active in commenting on sources, and in *using* others' comments in their independent learning and assessment, but less active in *responding to* or discussing their peers' work within Talis Elevate (it is important to note however that such conversations did occur in synchronous seminars, both on campus and online). Nonetheless, the convenor judged that this group engaged more actively in interaction than did previous cohorts. This was perhaps because they were more familiar with Talis Elevate due to use earlier in their studies, or because they had engaged in a more sustained manner in online learning across their studies and thus knew what was expected, or because Talis had included new features in the product to support low-level interaction (e.g. 'agree' functionality). As Table 29.2 demonstrates, 2020–21 witnessed a step-change in the level of student interaction through replying to one another's comments on the module.

Results indicate that the timing of students' engagement in collaborative activity is worth consideration. Both Students A and B, for instance, said that they prioritised independent analysis and 'reading' at the start of every week as content was released, somewhat limiting their ability to interact with others:

I was trying to get my seminar prep out of the way for all my modules early in the week, so I suppose my sort of role within that was probably less collaborative, just in the sense that I write all my ideas down and then I don't really come and look at it during the week. Maybe an hour before the seminar I look at it to see what other people have said.

Interestingly, their proactive approach to annotation was coupled with a more passive attitude towards 'live' collaboration in synchronous seminars, during which they described themselves as 'sitting back' and allowing the other students to contribute first, before building on their contributions.

Assessment

Assessment was a recurring theme during the interviews, suggesting that this was a driver for engagement in reading. Student A characterised themselves as being focussed on the module's summative assessments, initially mentioning the participation mark when asked about what motivated them to do the set reading, and also commenting that they 'always have [...] one eye on the assessments down the line'.

In the survey, annotation in Talis Elevate was perceived as playing an essential role in assessment (average: 8.4/10). Responses indicated that annotations on resources supported assessment planning, synthesis of information, and writing. It 'sped up' the process of completing assessments because 'everything' was 'in one place'. Working on shared documents was also rated as playing an important role in supporting students' assessment activity (average: 7.4/10; 60% of survey respondents stated that these supported preparation for assignments). The ability to access the contributions of peers when preparing for assessments was picked up by one of the interviewees; apparently, they 're-shaped thinking on the sources'. While assessment of participation (15% of final grade) was a motivating factor for some survey respondents, with others saying that they did not even think about it, it should be noted that interviewees highlighted the value that this form of assessment had played in building confidence earlier in their academic careers. This would appear to support Neuwirth et al.'s findings on the value, for both online learning and employability, of training students in requisite pedagogical behaviours, in order to engender a sense of the 'normalcy' of such behaviours in the classroom and beyond (Neuwirth et al., 2021).

About 80% of survey respondents felt that engagement in collaborative reading impacted on their learning, and 100% thought that participation in reading activities had played a role in their final results:

Because I participated more on Talis, I knew sooner what to base my research essay on unlike other modules when I found that harder. It also was a useful repository of notes which made planning the essay a lot easier. The comments also provided me with more to discuss in the seminars, helping to develop my ideas and understanding better.

Interviewees clearly perceived a strong correlation between reading, knowledge gain, and their ability to perform well in summative assessments, with one noting that they were pleased with their performance on the module and that this ‘wouldn’t have been the case at all, if not for the reading.’ Further, the thematic nature of the weekly seminars and associated reading tasks was perceived as having had a positive impact on performance, enabling students to add depth or, ‘a bit more flair’ to their work.

Discussion

Framing the Activity

Interviewees recognised that seminars, independent study activities and assessments all reinforced one another, whether online or in person. Students reported that such ‘constructive alignment’ (Biggs, 1996) was a key enabler of success on the module. Providing an array of closely inter-related opportunities for collaborative online reading enabled students with a range of different learning preferences to engage with the material (Chan & Pow, 2020).

The Role of the Academic

Interviews and survey responses indicated that the module convenor played an important role in prompting, affirming, guiding and ‘setting the scene’ for students, encouraging them to take independent ownership of their learning. Articulating clear expectations about student engagement in reading and annotation activities also encouraged participation (Howard et al., 2018; Miller & Merdian, 2020).

Cadence

The predictable ‘cadence’ of the module also supported reading as students were able to engage in reading activities on a regular basis. Importantly, they were able to choose the time and pace of their reading, as Student A made clear when noting how they tended to do the ‘homework’ at the start of the week, and refresh their memory by reading the comments of their peers just before synchronous classes. Student A chose when to engage in reading, defying neat categorisation as an ‘active’ or ‘passive’ learner (Michel et al., 2009)—the decision to act more passively in synchronous sessions was itself an active decision from a student who described themselves as taking the initiative when completing preparatory online reading tasks.

Reading and Annotation

Quantitative and qualitative data indicate that students engaged actively and regularly in online reading throughout the module and felt that this had a positive impact on their learning and attainment, enabling them to learn more deeply (Howard et al., 2018). Their reading extended beyond engagement with set sources, to consideration of the annotations of their peers, which were viewed positively. Our results thus tally with previous research, which posits that active reading can be a powerful driver for student learning (Tashman & Edwards, 2011), and that social annotation has the potential to impact positively on engagement and attainment (Brown & Croft, 2020).

Interaction and Collaboration

Surveys and interviews, as well as Talis analytics data, indicate that some students were reluctant to interact with their peers in Talis Elevate or shared documents. It is also important to note that observable levels of collaboration increased significantly compared to previous iterations of the module (Table 29.2). Such collaborative social annotation has been

shown to have positive benefits for learners in a number of contexts (Kalir, 2020). Respondents judged collaborative annotation to have both positive and negative impacts. Some students reported that such activities encouraged a new level of criticality, while others noted that the process could be anxiety-inducing, particularly when they had to make their own opinions visible for critique or to engage with the contributions of their peers (Bennett & Folley, 2014). Although respondents said that they felt nervous about being seen to criticise the contributions of their peers, they were comfortable with critiquing primary and secondary sources, possibly because they felt a sense of distance from the author (Cull, 2011; Maguire et al., 2020).

Further Opportunities and Implications

The variety of methods adopted on this module were ‘collectively beneficial’, supporting different students and their preferences for learning in a variety of ways. However, individuals reported that their ‘preference’ for activity adjusted during lockdown. It would be useful to investigate further how individual students adjusted during the ‘forced migration’ to online learning (Joordens, 2020; Neuwirth et al., 2021).

Students reported that ‘public’ annotation activity had both positive and negative implications, citing ‘self-censorship’ and ‘increased criticality’ of their own annotations before posting. Relatedly, anxiety prevented some students from posting publicly. Investigation into the impact of public annotation on students’ propensity to contribute should therefore be considered, as should further exploration of the impact that social inequalities have on reading and annotating behaviours in higher education (Reimer et al., 2021).

While students felt that the blended learning approach enabled them to participate more effectively, some respondents highlighted the importance of face-to-face interaction. Some students felt that interaction in synchronous online environments promoted higher levels of interaction, while others thought that the lack of ‘natural’ interaction reduced their engagement. Importantly, one student identified that their typical

engagement preferences reversed during lockdown, an area certainly warranting further investigation.

Many of the findings of this project will be transferable to post-pandemic teaching and learning contexts. Digital reading and critical analysis are core skills across all disciplines in higher education. Improved understandings of student motivations for engaging in collaborative annotation, associated anxieties and/or inequalities, and their practices as online readers will enable academics to further develop blended learning approaches that support the development of this core academic skill.

Conclusion

In the context of rapid changes to teaching and learning in higher education during pandemic-related lockdowns (Mishra et al., 2020), this project examined student reading practices in History. A mixed-methods approach was adopted that combined surveys, interviews and analysis of user behaviour when reading online. Survey respondents and interviewees view collaborative reading and annotation tasks as valuable for their learning in the following areas: co-creation of knowledge, widening perspectives on the subject matter, (in)validation of opinion and confidence-building. Quantitative analysis indicates that the cohort gained most from annotating primary sources collaboratively using Talis Elevate, because it enabled them to focus on close reading of texts. These activities, coupled with work on shared documents, were perceived to have had a significant impact on learning, from the time at which the initial annotation took place, via engagement with the comments of others, to later synthesis when preparing for assessments. While the award of participation marks encouraged some students to engage, no students viewed this as the primary motivator for reading. More generally, however, alignment between reading, annotation activity and overall module assessment was viewed as a positive driver for learning. Finally, active and early explanation of the aims and structure of the module by the tutor was important in promoting collaborative annotation, while adjusting discussion topics in seminars (online or in-person) in response to student contributions seems to have encouraged wider student participation and learning.

References

- Adeyemi, I. (2021). Influence of Covid-19 Lockdown on Reading Habit of Nigerians: A Case Study of Lagos State Inhabitants. *Reading & Writing Quarterly*, 37(2), 157–168. <https://doi.org/10.1080/10573569.2020.1857891>
- Bennett, E., & Folley, S. (2014). A tale of two doctoral students: social media tools and hybridised identities. *Research in Learning Technology*, 22, 1. <https://doi.org/10.3402/rlt.v22.23791>
- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347–364. <https://doi.org/10.1007/BF00138871>
- Brown, M., & Croft, B. (2020). Social Annotation and an Inclusive Praxis for Open Pedagogy in the College Classroom. *Journal of Interactive Media in Education*, 1(8), 1–8. <https://doi.org/10.5334/jime.561>
- Chan, J. W. W., & Pow, J. W. C. (2020). The role of social annotation in facilitating collaborative inquiry-based learning. *Computers & Education*, 147, 1. <https://doi.org/10.1016/j.compedu.2019.103787>
- Cohn, J. (2021). *Skim, Dive, Surface: Teaching Digital Reading*. West Virginia University Press.
- Cull, B. W. (2011). Reading revolutions: Online digital text and implications for reading in academe. *First Monday*, 16(6), 1. <https://doi.org/10.5210/fm.v16i6.3340>
- Howard, P. J., Gorzycki, M., Desa, G., & Allen, D. D. (2018). Academic reading: Comparing students' and faculty perceptions of its value, practice, and pedagogy. *Journal of College Reading and Learning*, 48(3), 189–209. <https://doi.org/10.1080/10790195.2018.1472942>
- Joordens, S. (2020, June 15). The Great COVID-Forced Migration to Online Learning: Using Learning Theory to Inform Optimal Enculturation. *HIGHER ED CONNECTS*. <https://higherconnects.com/covid-online-learning/>
- Kalir, J. H. (2020). Social annotation enabling collaboration for open learning. *Distance Education*, 41(2), 245–260. <https://doi.org/10.1080/01587919.2020.1757413>
- Maguire, M., Reynolds, A. E., & Delahunt, B. (2020). Reading to be: The role of academic reading in emergent academic and professional student identities. *Journal of University Teaching and Learning Practice*, 17(2), 1–12. <https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ1254411>
- Michel, N., Cater, J. J., III, & Varela, O. (2009). Active versus passive teaching styles: An empirical study of student learning outcomes. *Human Resource Development Quarterly*, 20(4), 397–418. <https://doi.org/10.1002/hrdq.20025>

- Miller, K., & Merdian, H. (2020). "It's not a waste of time!" Academics' views on the role and function of academic reading: A thematic analysis. *Journal of University Teaching & Learning Practice*, 17(2), 1. <https://ro.uow.edu.au/jutlp/vol17/iss2/3>.
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 1. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2021). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156. <https://doi.org/10.1177/1477971420947738>
- Reimer, D., Smith, E., Andersen, I., & Sortkær, B. (2021). What happens when schools shut down? Investigating inequality in students' reading behavior during Covid-19 in Denmark. *Research In Social Stratification and Mobility*, 71, 100568. <https://doi.org/10.1016/j.rssm.2020.100568>
- Tashman, C. S., & Edwards, W. K. (2011). Active reading and its discontents: The situations, problems and ideas of readers. In D. Tan, G. Fitzpatrick, C. Gutwin, B. Begole, & W. A. Kellogg (Eds.), *CHI '11: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. Conference proceedings of CHI '11: CHI Conference on Human Factors in Computing Systems, Vancouver BC, Canada* (pp. 2927–2936). Association for Computing Machinery. <https://doi.org/10.1145/1978942.1979376>
- Wood, J., East, M., & Williard, H. (2022). Collaborative Annotation to Support Students' Online Reading Skills. In S. Hrastinski (Ed.), *Designing Courses with Digital Technologies* (pp. 66–71). Routledge.
- Zhu, X., Chen, B., Avadhanam, R. M., Shui, H., & Zhang, R. Z. (2020). Reading and connecting: Using social annotation in online classes. *Information and Learning Sciences*, 121(5/6), 261–271. <https://doi.org/10.1108/ILS-04-2020-0117>



30

Emergence of ‘Cloud Simulation’ as a Virtual Learning Tool in Maritime Education

Zakirul Bhuiyan and Jaikar Singh Sohal

Introduction

Maritime is a safety-critical industry. Investigations into maritime incidents have always highlighted that it is not a single factor but an interplay of numerous factors that causes maritime casualties. The lack of sufficient skills in demanding situations has been shown to be one major contributing factor in various near misses, delays, incidents, and accidents (Kim & Nazir, 2016). Due to rapid advancement in technologies, especially digital technology onboard ships, there is an increasing complexity of human–machine interaction. Handling these ever-evolving technologies in all kinds of environments and situations is an essential element of the seafarer’s competence. Further, there is a direct relationship between the competence of seafarers through quality maritime education and training activities and an effective, safe, and environmentally responsible functioning of the maritime transport sector (Nikitakos et al., 2017).

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Developing these competencies is only possible by training the seafarer to operate these machines or systems in near real-life settings, which is neither possible in traditional classroom-based training due to its limitation nor by onboard training due to the high risks involved. International Maritime Organization (IMO) recognised the importance of simulators in Maritime Education and Training (MET) to enhance the competency of seafarers and by bringing up amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (SCTW), making simulation training mandatory for various competencies.

The simulator training has demonstrated to achieve higher training outcomes compared to conventional classroom training (Nazir & Manca, 2015) as it has the capability to provide both physical and behavioural realism that closely models the complexities of the authentic maritime domain (Bhardwaj & Pazaver, 2014). Simulator training has proved to effectively improve the level of proficiency in those tasks or aspects in which real experience proves to be inefficient or deficient. (Malik & Zafar, 2015). Simulation creates an effective collaborative, critical thinking and case-based learning environment (Cwilewicz & Tomczak, 2008; Bhardwaj & Pazaver, 2014), and can be highly effective in improving the trainee's perception assessment of dangerous situations (Sanfilippo, 2016).

However, the unprecedented situation caused due to COVID-19 pandemic brought education and training activities across all sectors to a sudden halt. Likewise, most of the MET institutions were not prepared for this kind of emergency and had no choice but to either cease their teaching activities (IMO, 2020) or start looking for alternate means for delivering education and training. MET institutes that had an existing information technology (IT) infrastructure in place were able to adapt their theory-based courses or modules to online delivery within a few months (Demirel, 2021). However, MET faced a challenge in delivering practical elements of courses, including simulation-based training (Demirel, 2021). The cloud-based simulation came to the forefront as a lifesaver. Although cloud simulation has been successfully used by some professional MET institutes run by shipping companies, there were many challenges faced by various other MET institutes while shifting from traditional simulation training.

This chapter intends to highlight the benefits and challenges of cloud-based simulation that the MET sector experienced during the COVID-19 pandemic.

Evolution of Simulation Training during COVID-19

The sudden onset of the COVID-19 pandemic forced the education sector to face a challenge of magnitude they have never seen before. The MET sector was not an exception. Among many challenges, the inability to attend maritime education and training in person (Kim et al., 2021) has been one of the prime challenges. Education establishments worldwide were forced to either go for a full shutdown with the cancellation of courses or go for innovative alternatives like online learning and distance learning options. However, there was a widespread acceptance of digital technology in learning by both training providers and learners on a positive note (UK, 2020; Kim et al., 2021).

The time taken by the MET to adapt to the changes varied across the sector. In the UK, most maritime training providers adopted two approaches. Firstly, they switched the teaching of theoretical learning outcomes to an online platform as it offered greater flexibility (e.g. online tutorials, self-work, one-to-one teaching, forums). Secondly, upon relaxation of lockdown restrictions, the practical learning outcomes were completed in labs/workshops/multi-function classrooms (MFC) with reduced cohort or group sizes while safeguarding the safety of trainees and staff.

The simulation-based training faced the toughest challenge as there was no ready solution or alternate option available for the same at the onset of the pandemic. It was, therefore, necessary to quickly find alternate solutions to adapt the simulation training to the demand of the real situation, in terms of both the reorganisation of curricula and the didactic support assured in terms of resources, tools and e-learning communication platforms (Coşofreţ & Avram, 2020). Furthermore, one of the most critical elements of safely operating today's modern and

technologically sophisticated ships is the seafarers themselves (Baldauf et al., 2016); while adapting any of the inventive approaches to teach these competency-based courses, it was important to ensure that quality of teaching, learning and assessment is not compromised. It was also paramount to keep the regulatory aspect in mind as simulation training is part of the maritime competency structure set under IMO's Standard of Training, Certification and Watchkeeping Convention (as amended).

Another challenge, which was critical to consider when deciding on the alternate simulation solutions, was to ensure the fidelity (the inclusion of real-world elements) aspect of simulators as there is a direct relationship between fidelity and validity. As per Malik and Zafar (2015), there is generally more confidence in a high-fidelity system than in a low-fidelity one.

Some emerging immersive technologies like cloud simulation, virtual reality (VR), augmented reality (AR) and mixed reality (MR) were already there on the market and were used by many other commercial sectors to train their employees. However, the technology providers and the maritime education sector did not seriously consider their use in MET until the onset of the COVID-19 pandemic. Among these solutions, the tool that caught the attention of MET during this pandemic is cloud simulation, which showed capabilities to remotely deliver some of the ancillary courses like Global Maritime Distress and Safety System (GMDSS), Electronic Chart Display and Information System (ECDIS) and navigation equipment training. The maritime simulation solution providers such as Wartsila, Applied Research Institute (ARI) and Kongsberg reacted promptly to the posed challenge by adopting their existing cloud-based maritime industry solutions like Wartsila Voyage and redesigning them as per the need of the maritime education and training sector.

Although the cloud simulation has not been accepted for delivery of competency courses due to regulatory restrictions, the maritime industry's response has been very encouraging. Many shipping companies have readily adopted cloud simulation to provide professional training to seafarers at their training centres. Although modern innovative learning and teaching technologies like online learning and cloud simulation have shown immense potential to shape the future of maritime education and

training, some challenges have come to the forefront that needs the industry's attention, as discussed in the next section.

Cloud Simulation: Challenges and Opportunities

Cloud simulation training is a tool that allows instructors to run simulation models and exercise scenarios online using cloud platforms to provide remote training to students at remote locations. It allows instructors to have remote access to instructor stations and simulators (away from their training centres) and students to have access to the simulator exercises using their PCs/Laptops/Tablets or other mobile devices (Kim et al., 2021).

The instructor-led training session using cloud simulation starts with the course administrator scheduling the classes, notifying the assigned instructors and communicating the access links and communication method/protocol to the trainees in advance. At the beginning of the training session, the instructor uploads the exercise and confirms a positive connection (registration) with each trainee's system. The communication protocol is positively established between the instructor and each trainee using the agreed medium (Zoom, Skype etc.). The training is delivered after briefing the trainee on the objectives of the exercise and other details. Once the session is completed, the instructor carries out debrief of the exercise.

Although cloud simulation has not been used for competency education and training by MET worldwide, the experience of some shipping companies' training centres has shown immense potential to transform maritime simulation training in the future. Shipping companies used cloud simulation for delivering commercial courses like Bridge Team Management (BTM) and Liquid Cargo Operations Simulator (LICOS). The cloud simulation made simulation training possible for many maritime countries that do not have the resources to invest in expensive traditional simulator training centres. The cloud simulation can also be

tailored to deliver standalone training to individuals located anywhere and at any time.

The experience with cloud simulation training during the COVID-19 pandemic has helped to highlight some challenges and limitations of this new emerging learning technology in MET. Firstly, cloud simulation involves students completing the exercise on their personal computer (with a single and small screen size), which does not provide the same level of fidelity as that of a traditional simulation setup, which is important in simulation training. If the simulator does not mimic the real environment conditions correctly, the learned modelling may be wrong (Liu et al., 2008) and can lead to a negative learning outcome, and it can be a challenge to re-learn what has been learned wrongly (Farmer et al., 2017). Secondly, it is a challenge to provide a collaborative learning environment both during exercise and during debriefing sessions as students are located remotely at individual locations (Kim et al., 2021). Debriefing is a particularly important pedagogical element of simulation-based training which allows the instructor to employ a variety of mediational tools to highlight the strengths and weaknesses of individuals as well as of teams and at the same time, it provides an opportunity to students for group reflection by allowing peers to evaluate their actions (Sharma et al., 2018). Thirdly, it can be a challenge for the instructor to observe students' work in combined exercises on the computer, which is especially important to proper recordkeeping for effective assessment and feedback. Another limitation the cloud simulation faces is the availability of effective communication infrastructure, especially a reliable internet connection with fast download/upload speed, which is paramount for the effective delivery of cloud simulation-based training (Kim et al., 2021).

As per Hjellvik and Mallam (2021), cloud-based simulator training requires differing expectations, skills and motivations from both trainees and instructors, including computer knowledge and skills. The success of cloud simulation training depends on the computer knowledge of both the instructor and the trainee. The learner should be confident to operate the local and internet application over their personal computing unit, while the instructor must be trained to operate the trainer cloud-based application to plan, design and effectively deliver training exercises over cloud simulation.

A Comparison Case Study of Teaching and Learning

Since the onset of the COVID-19 pandemic, the MET sector undertook many different teaching approaches to ensure continuity of maritime education and training of seafarers. To understand the effectiveness of these approaches, it was important to gather and analyse the experience of MET educators and technology providers who were instrumental in providing teaching and learning using innovative tools like online learning and cloud simulation.

To achieve this goal, qualitative research using a focus group panel was conducted with representatives from the maritime sector's professional, academic and regulatory sections. A discussion was carried out after obtaining ethical clearance following Solent University's ethics clearance policy and after receiving all the participants' signed informed consent (Table 30.1).

Table 30.1 Details of participants

	Designation	Organisation
Participant 1	Lecturer	Maritime College, UK
Participant 2	Senior Lecturer	Maritime School of renowned University, UK
Participant 3	Senior Lecturer	
Participant 4	Senior Lecturer	Maritime Institute (Professional Body for maritime professionals)
Participant 5	Senior Lecturer	
Participant 6	Director	
Participant 7	Training Manager	Renowned Ship Management Company 1
Participant 8	Training Manager	Renowned Ship Management Company 1
Participant 9	Group Director (Training & Crewing)	Renowned Ship Management Company 2
Participant 10	Director	Simulation technology developer 1
Participant 11	Head, Product Simulation & Training	Simulation technology developer 2
Participant 12	Marine Surveyor and Examiner	National Maritime Authority
Participant 13	Chief Officer	Renowned Ship Management Company 3

In the focus group discussion (see Table 30.2), the participants shared experiences of providing cloud simulation training as part of online education during the Pandemic and highlighted many challenges and advantages (please see the focus group discussion questions).

Findings from the Focus Group Session

According to the focus group participants, the sudden workload experienced by the lecturers on the onset of COVID-19 was one of the common challenges where they had to prepare the online learning materials in a short period of time. Participant 1 expressed his experience as a ‘sudden shock’. The level of shock varied as per the availability and training of the digital learning technologies. Participant 1 further expressed that

we had to go through ourselves first, then train ourselves with a lot of new stuff and new software. We had to provide laptops to students, so our college purchased almost two and a half thousand laptops.

Some lecturers who had the training and experience on an established virtual learning platform were fortunate as they were able to make the transition from face to face to online learning with minimal adjustment to their course materials, as compared to those who did not have either the training or the access. Participant 5 said, ‘I think it really went surprisingly well, that was partly because I already had quite a lot of online content that has been developed over the last few years’. The experience

Table 30.2 Focus group discussion questions

-
1. How was your experience from teaching & learning perspective with respect to cloud simulation during COVID-19? What Challenges and benefits did you experience as compared to traditional simulation training?
 2. What has been the learner’s feedback for the training they received using cloud simulation?
 3. *Question to Simulation technology developers*—What has been the response from Maritime Industry (Shipping companies and MET institutes) towards cloud simulation since onset of COVID-19?
 4. *POLL*—In your opinion, do you see cloud simulation as a potential replacement of traditional simulators in future for competency-based MET?
-

of shipping companies varied as per their level of readiness, as Participant 9 stated:

We have been slightly lucky because we started setting up our learning management system online platform for training two years before the pandemic started. So, when we were hit with COVID, we were basically ready having more than 150 courses.

In the experience of the maritime administration, although it was relatively easier for bigger institutes to adapt to the changes as compared to smaller training providers, as Participant 12 states, 'when it comes to a smaller training provider it is very difficult for them to provide facility for virtual observation'.

The next common challenge echoed by most of the participants was poor connectivity issues. Participant 2 expressed, 'Some of our overseas students did try to do everything on mobile phones with poor internet connections, and that made it quite challenging at times'.

Participant 8 further added, 'Cloud simulation becomes a bit more challenging, especially when you have candidates coming from certain remote areas where the connectivity is an issue'. Participant 7 further added, 'it is not only the local connectivity between students and instructor, but it also depends on the connectivity between the servers that are working'.

Participants highlighted the difficulty in limiting the distractions of students. Participant 1 mentioned 'some students were always hiding behind the screen with only name is showing, so I do not know whether they were learning until we take a summative assessment', while Participant 5 added that 'I had to make sure that I could see each person on the screen to see if they were attending and carrying out the work'. Participant 6 from the professional maritime institute also shared his similar experience,

Our biggest challenge was controlling the learning environment in a virtual classroom. You can provide the space, the equipment, everything else. You cannot limit the distractions.

Participants emphasised that students found it difficult to remain focused as they feel isolated due to missing human connection while engaging with any learning technologies, including cloud simulation. Participant 9 reaffirms, saying 'how many hours can you spend online talking with people? ... they will lose focus at a certain point looking at the screen much faster than in an actual simulator environment'. Participant 6 stated that they had to reduce the length of exercises and course length and reduce the teacher to learner ratio to impart meaningful online learning. He stated,

We had to convert from two to three days short courses delivered over 6–7 hours to 3.5 hours online. We were earlier limiting it to a twelve to one ratio with the teacher, and now we do eight to one, and we find that pretty much the maximum.

Participant 9 said this distraction issue had pushed them to compress longer courses to shorter duration, thus making a compromise on the course structure and added 'by compressing that you have to skip some of these subjects or the topics which need to be discussed'.

Another major limitation of cloud simulation highlighted during the discussion was the inability to achieve the same level of fidelity as that of traditional simulators, which is important to bring validity in simulation training so that a student is trained and assessed in a real-life setting as close to what he will experience at sea. Many participants agreed that one can achieve only 60%–70% of fidelity in cloud simulation as compared to traditional simulators.

Lack of proper infrastructure (hardware) with students and lecturers comes as a limitation for cloud simulation training. In traditional maritime simulators, there are multiple monitors, each showing different equipment/sensors onboard ships. Students are required to cognitively use the information from all these monitors and carry out the given task safely. Normally, a student carrying out cloud simulation exercises on a personal computer has a limitation of a single screen requiring a continuous shift through different tabs to access different equipment information. It is a challenge not only during the familiarisation stage but also

during the conduct of exercises. Participant 4, who has delivered many cloud simulation-based courses, said,

The number of monitors available to the students is very crucial. If the monitor size is very small and you have a full display of a cargo system on it, then reading the valve number and identifying these systems are very hard.

Participant 13, a seafarer who has undergone cloud simulation training, stated, 'If you want to get familiarised with all the screen tabs ... it takes time and at the same time to finish the certain assignment with given time, we cannot finish the assignments'.

Participant 8 highlighted that ensuring effective communication during collaborative learning exercises is a big challenge using cloud simulation. The same is echoed by Participant 9, who said, 'the discussion itself between the trainees and the instructor had been reduced significantly'. It affects not only the delivery, of course, but also the assessment of students. The lecturer or trainer needs to have effective communication skills to motivate and engage the students. At the same time, students also need effective communication skills to successfully complete the tasks in collaborative exercises. He further commented that 'everybody is behind the curtain and to understand another person or to understand the team member's body language is not possible at all'. He further added, 'if he's not communicating, you cannot assess him properly'.

Despite the challenges highlighted earlier, the industry experience with cloud simulation training during the COVID-19 highlighted some advantages for maritime education and training, especially professional training. The first advantage highlighted was the reach through cloud simulation as participant 6 said, 'In the event of a near miss or an issue, they can rapidly adopt a training exercise to it and get out to the maximum number of their employees without having to bring them into a classroom to address those issue'.

When asked 'how was the response of maritime industry towards cloud simulation during a pandemic?', simulation technology developers informed that the response varied as per end-users and as per region. Participant 10 informed that many shipping companies have adapted

cloud simulation 'to ensure continuity of training which they were responsible to their owners and charterers', whereas the response from competency-based MET institutes has not been very encouraging. He further added, 'shipping companies loved the idea because of the humongous cost saving they have in terms of logistics, accommodations, travel and people'. Participant 11 added that 'shipping companies tend to remain on the cloud, even if there are openings (post-COVID) in their region'. On the contrary, competency-based MET centres were reluctant to adopt the cloud simulation due to the regulatory restrictions imposed by international and national maritime authorities, as Participant 10 mentioned,

as of date, not many flag states have approved cloud-based simulation or have allowed to issue a certificate of competency (CoC) Not many classification societies have approved cloud-based simulation.

Participant 12 from the national maritime administration confirmed that 'administrations are quite cautious now as to plunge into this...we are moving as an administration towards that, and we will embrace it...but with planning'. Participant 11 further added that for those METs (Maritime Education and Training) who have used cloud simulation for some professional courses, 'when it comes to METs ... as soon as countries are opening up again, they tend to go back to the traditional one'. Interestingly, when asked to vote if they see cloud simulation as a potential replacement of traditional simulators in future competency-based MET, 71% of participants responded as 'No' and the rest of them responded as 'Not sure', while none see it as a possibility.

However, Participant 10 found cloud simulation a fantastic tool as they can impart training to their substantial number of crew in a short span of time, which is impossible to achieve in traditional classroom-based training. Participant 10 informed, 'they are running three or four parallel cloud setups of navigation simulators every day, so they are covering a vast range of people in a given day'. He also highlighted the advantage of providing Taylor-made customised training on ship equipment or post any incident or accident investigation within a short span of time to the maximum number of their crew members.

When asked during the discussion as to how was the students' feedback on cloud simulation, the response was mixed. Many participants highlighted that students see the cost-saving aspect of travelling and lodging costs as a big benefit. They also highlighted that students appreciate the flexibility cloud-based simulation offers for certain professional independent courses, where they can learn at their own pace by re-running the exercises. Participants 8 and 9 stated that their crew (seafarers) liked the cloud simulation-based training as it enabled them to undergo their professional courses during their short leave period from the comfort of their home as they do not have to travel long distances to training centres and can spend more time with their loved ones. Participant 3 stated, 'I have had courses where you know people have had childcare issues, so I have had people with their children sit next to them during the course'. On the contrary, some students did not like the experience with cloud simulation and would like to undergo training with traditional simulators.

Key Learning Points and Concluding Remarks

The purpose of this research was to identify the effectiveness of cloud-based simulation training during the unprecedented COVID-19 pandemic situation, which was handled by MET providers in delivering traditional practical simulation-based training. The focus group discussion revealed that many lecturers had to undertake training themselves at the beginning with a new delivery of technology-enhanced teaching and getting familiarised with the new software. Additionally, the training providers had to invest in establishing the virtual learning platform, and it was very difficult for small training providers with their limited resources. It was also quite challenging at times due to the poor internet connections for the students from certain remote areas, especially many students from overseas.

One of the lecturers' main challenges was controlling the learning environment in the virtual classroom, and many students found it difficult to remain focused as they feel isolated due to the absent human interface. Another major limitation of cloud simulation that was brought up during the discussion was its inability to achieve the same level of

fidelity as traditional simulators, which is critical for bringing validity to simulation training so that a student is trained and assessed in a real-life setting as close as possible. Compared to traditional simulators, several participants concluded that cloud simulation could only attain 60%–70% authenticity in terms of delivery, monitor sizes, access to the full functionality of equipment and communication necessities during collaborative learning exercises.

Despite the numerous hurdles, several benefits have been noted, as many shipping businesses have adopted cloud simulation to assure training continuation during the COVID-19 pandemic.

The shipping businesses were also enthusiastic about the concept because it would save them much money in terms of logistics, lodging, travel and people. However, presently only a few flag states and marine administrations have permitted cloud-based simulation. Moreover, surprisingly when asked if the participants envision cloud simulation as a viable replacement for traditional simulators in future training, most participants (71%) disagreed. As a result, there is a possibility that training providers will return to traditional simulation training when the COVID restrictions are relaxed or totally removed.

During the pandemic, it is established that the cloud-based simulation is a solution that might be employed as a temporary measure. However, as per the participants, the traditional simulation training is superior since participants reported that the amount of communication between trainees and instructors is greatly reduced in cloud simulation. Future exploration into cloud simulation techniques could be useful to further investigate as to how the virtual techniques could improve the future simulation training needs, especially during any learning disruptions.

References

- Baldauf, M., Dalaklis, D., & Kataria, A. (2016). Team training in safety and security via simulation: A practical dimension of maritime education and training. In *INTED2016 Conference* (pp. 8519–8529). World Maritime University, Valencia. <https://doi.org/10.21125/inted.2016.0983>

- Bhardwaj, S., & Pazaver, A. (2014, January–June). Establishing the underpinning theories of maritime education and training for on-board competencies, *AMET Marit*, pp. 55–73.
- Coşofreţ, D., & Avram, E. R. (2020). Evaluation of the maritime higher education didactic support during the coronavirus pandemic. Case Study. In *The 15th International Conference on Virtual Learning ICVL* (pp. 493–499).
- Cwilewicz, R., & Tomczak, L. (2008). Improvement of ship operational safety as a result of the application of virtual reality engine room simulators. *WIT Transactions on Information and Communication Technologies*, 39, 535–544. <https://doi.org/10.2495/RISK080521>
- Demirel, E. (2021). Impact of Covid 19 pandemic on maritime education and training. In *International Scientific Conference SEA-CONF* (pp. 297–314). MBNA Publishing House Constanta, Constanta. <https://doi.org/10.2127/9/2457-144X-21-039>
- Farmer, E., van Rooij, J., Riemersma, J., & Jorna, P. (2017). *Handbook of simulator-based training*. Routledge.
- Hjellvik, S., & Mallam, S. (2021). Adaptive training with cloud-based simulators in maritime education. In A. Pazaver, M. E. Manuel, J. Bolmsten, M. Kitada, & I. Bartuseviciene (Eds.), *International maritime lecturers' association. Seas of transition: Setting a course for the future* (pp. 179–190). World Maritime University. <https://doi.org/10.21677/imla2021.21>
- IMO. (2020). The impact of COVID-19 on maritime education and training. In *MSC 102/INF.25—Maritime Safety Committee* (pp. 1–5). IMO, London, UK. <https://www.ics-shipping.org/wp-content/uploads/2021/03/MSC-102-INF.25-The-impact-of-COVID-19-on-maritime-education-and-training-ICS-and-IAMU.pdf>
- Kim, T., & Nazir, S. (2016). Exploring marine accident causation: A case study. In P. Arezes et al. (Eds.), *Occupational safety and hygiene IV* (pp. 369–373). CRC Press.
- Kim, T. E., Sharma, A., Bustgaard, M., Gyldensten, W. C., Nymoer, O. K., Tusher, H. M., & Nazir, S. (2021). The continuum of simulator-based maritime training and education. *WMU Journal of Maritime Affairs*, 20(2), 135–150. <https://doi.org/10.1007/s13437-021-00242-2>
- Liu, D., Blickensderfer, E. L., Macchiarella, N. D., & Vincenzi, D. A. (2008). Transfer of training. In *Human factors in simulation and training* (pp. 49–60). CRC Press.
- Malik, A. A., & Zafar, N. (2015). Applications of simulation technology—Pitfalls and challenges. *TransNav—The International Journal on Marine*

- Navigation and Safety of Sea Transportation*, 9(3), 391–396. <https://doi.org/10.12716/1001.09.03.12>
- Nazir, S., & Manca, D. (2015). How a plant simulator can improve industrial safety. *Process Safety Progress*, 34(3), 237–243. <https://doi.org/10.1002/prs.11714>
- Nikitakos, N., Sirris, I., Dalaklis, D., Papachristos, D., & Tsoukalas, V. D. (2017). Game-based learning for maritime education and training: The case of Trader of the World. *WMU Journal of Maritime Affairs*, 16(2), 265–291. <https://doi.org/10.1007/s13437-016-0119-3>
- Sanfilippo, F. (February 2016). A multi-sensor fusion framework for improving situational awareness in demanding maritime training'. *Reliability Engineering and System Safety*, 161, 12–24. <https://doi.org/10.1016/j.res.2016.12.015>
- Sharma, A., Nazir, S., Wiig, A. C., Sellberg, C., Imset, M., & Mallam, S. (2018). Computer supported collaborative learning as an intervention for maritime education and training. In S. Nazir, A. Teperi, & A. Polak-Sopinska (Eds.), *Advances in human factors in training, education and learning sciences, AHFE 2018* (pp. 3–12). Springer.
- UK, M. (2020). *Maritime skills commission Annual Report*. <https://www.maritimeuk.org/priorities/people/skills-commission/reports/maritime-skills-commission-annual-report-2020/>



31

Delivery of e-Research-informed Teaching (e-RIT) in Lockdown: Case Insights from a Northern Irish University

Paul Joseph-Richard and Trevor Cadden

Introduction: Research-informed Teaching in Practice

Linking teaching and research in classroom settings is inherently complex due to the huge variation in the ways that teaching and research are understood, interpreted, and enacted in practice (Joseph-Richard & Jessop, 2020). Students may also experience the research-teaching blend, known as the research-teaching nexus, in multiple ways, on different occasions, during their programme of study (Healey, 2005). Four of the most commonly known ways of experiencing research-informed teaching (RIT) can be labelled as ‘Research-led teaching’, where students learn about the research findings that underpin the curriculum content; ‘Research-oriented teaching’, where students learn about research processes and how knowledge is produced in disciplines; ‘Research-based teaching’, where students learn as researchers through inquiry-based

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activities in classrooms; and ‘Research-tutored teaching’, where students learn research findings by engaging in critical discussions with teachers. Although all of these RIT approaches could be used in classrooms, scholars (e.g., Lewthwaite & Nind, 2016; Earley, 2014) agree that teaching research methods, in general (i.e., Research-oriented teaching), is challenging, regardless of the methodological approach, discipline or year level. Most challenges stem from students perceiving the study of research methods as generally dry and uninteresting, while also struggling to understand what they need to know, what they need to do, and where they are positioned in the research landscape. As a result, they feel anxious or nervous about the module and they come to the course with poor attitudes towards, or misconceptions about, research (Kilburn et al., 2014). Therefore, Pfeffer and Rogalin (2012) recommend the use of more experiential and hands-on approaches to teach research methods. When the pandemic-triggered lockdowns began to disrupt educational routines across the globe (Almpanis & Joseph-Richard, 2022; Mishra et al., 2020; Bao, 2020), we were challenged to find innovative ways of teaching research methods while promoting online engagement and collaboration. This chapter presents the 12 different pedagogic strategies that we used during the lockdown to make ‘research-oriented teaching’ engaging and meaningful.

Learning Context and Academic Setting

A Research Methods module was due to be taught in a traditional face-to-face teaching format to two cohorts of postgraduate students when the COVID-19 restrictions were announced in Northern Ireland in the UK. Like most teachers across the globe, we found ourselves engaged in emergency remote teaching (ERT). ERT is defined as a ‘temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstance’ (Hodges et al., 2020, p. 7). With less time in our hands to search for an ideal set of technological tools, we made use of the online delivery platform Blackboard Collaborate that had been relatively underutilised in the university.

Programme and Module Information

The module aimed to develop research skills to enable students to conduct a piece of research or a consultancy project related to management, and to obtain the intellectual, professional and transferable skills needed for a career in management. This module sits on the two full-time programmes, Master's in Business Administration (MBA) and MSc Business Development and Innovation (MSc BDI), at a research-led university. The module contents include the key aspects of a research process from identifying a research problem, to developing research questions, reviewing the literature, determining an appropriate design, collecting and analysing data and writing up the dissertation. Since the module emphasises learning the 'how' of the knowledge construction processes, it is *research-oriented* in its essence. As part of their assessment, students are required to develop a project proposal of 2500 words by outlining their plan for a piece of research on a self-selected management topic of their choice, and then complete an applied research project in the form of a dissertation (10,000 words). This assessment includes working in partnership with an organisation to solve a real need that is underpinned by the latest management thinking.

Typically, in a pre-COVID campus-based delivery, we would have included a range of face-to-face lectures on current research findings to help them understand the curriculum content and the 'nuts and bolts' of doing systematic research (i.e., research-led teaching). Students would have been working in groups, under the close supervision of research-active teachers, and discussing previous submissions of coursework and journal papers (i.e., research-tutored teaching). They may have had the opportunities to promote peer collaboration and a commitment to shared learning in the tutorial groups. An industrial field trip to a local start-up hub would have been organised to encourage students to reclaim a sense of wonder by asking questions about real-world management practice (Berry, 1998). However, the first lockdown disrupted our plans. Since this module, in its pre-COVID delivery mode, received high scores of negative feedback (54%), we felt that the rapid switch to ERT provided an opportunity to review it. The specific mix of international students,

who had come from countries where more hierarchical and traditional teaching cultures were prevalent, also necessitated the module review. The cohorts ($n = 42$ and 26 , respectively) included students from India, Pakistan, Russia, Saudi Arabia, Egypt, Nigeria, Liberia and a handful of local students, and their academic motivation and engagement patterns were not necessarily aligned with the learner-centred approaches that are largely derived from the Anglo-American theorising and pedagogical practices (Elliott, 2014), which are typically used in teaching in the UK institutions.

A theory-based teaching approach in an online environment: We used Gilly Salmon’s (2000) classical ‘Five Stage Model’ of online teaching (see Fig. 31.1) to re-imagine research methods teaching within an online environment. This model specifies a hierarchical set of the five stages of students’ development as online learners.

As per this model, in Stage 1, accessibility is the key foundational building block for online learning and where the motivation to learn emanates from. If students have issues accessing learning contents, or if the learning itself is not user friendly, then they quickly disengage. Online socialisation follows in Stage 2, through confidence building and early engagement techniques. In Stage 3, there are deeper socialisation activities and collaborative learning tasks. Students take control of their own

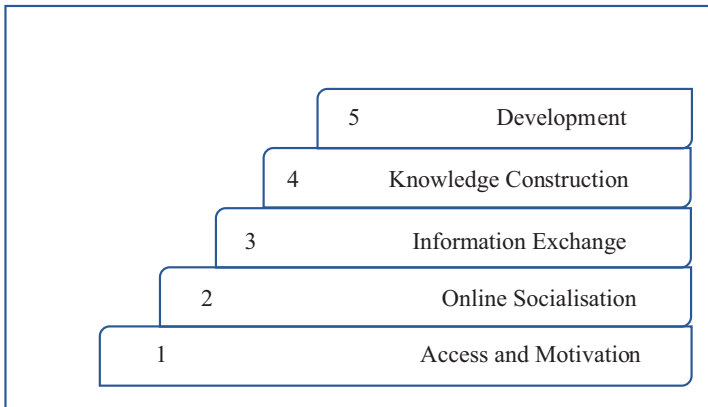


Fig. 31.1 A simplified, five-stage model of online teaching. (Adapted from Salmon, 2000)

learning and knowledge construction in Stage 4, while developing their identity as confident online learners in Stage 5. Throughout these stages, learners are supported by teachers, who use a range of online activities, and this model specifies the corresponding technical support that is required to enable the students' engagement journey. Salmon, in her subsequent publications, identifies a range of pedagogic approaches, labelled as 'E-tivities' (2013), which are used to promote an active participation of individuals and groups in online teaching, and we utilised these in our online sessions. As this is a proven model for achieving high quality, which is student-centred digital learning, it is deemed appropriate for rapid re-design and online engagement. Online engagement is understood as an experience that is influenced by a range of factors, such as an engaging teacher, course design, peer community, learners' self-confidence, and their personal and professional pressures (Farrell & Brunton, 2020).

Promoting Online Engagement

Stages 1 and 2: Providing Access, Increasing Motivation and Supporting Online Socialisation

To ensure that there was access to all learning materials and to give more options to stay engaged remotely, we spent time with virtual learning environment experts to ensure that the contents were accessible on a range of devices. We needed to be 'welcoming and encouraging' in a digital context, and hence we introduced a range of icebreaker activities, including Whiteboard Hello, Breakout rooms speed-date and LEGO group sessions.

1. *Whiteboard activity*: We used the digital, interactive smartboard function called whiteboard, with all its tools for free handwriting, inserting texts and colouring. We asked our students to write 'Hello' on the whiteboard in their native language. There were 16 different languages on the whiteboard at the end of this exercise. They were asked to write the name of the locations from where they joined the classes from.

Occasionally, we asked them to write a virtual icebreaker question to their peers, using the Chat function. Some of their questions included the following: 'Where do you work most frequently from at home? Your kitchen table? The backyard? Or Your bed? What's your number one tip for combating distractions when learning from home? What is the one thing you could share so that we could be productive and motivated when learning remotely? What is the one thing that we would never guess about you? Are you an early bird or night owl?' Such a creative use of the Whiteboard and Chat functions helped ease students into team bonding and empowered those students who found it difficult to voice their opinions in a group of strange learners.

2. *Breakout room speed-date exercise*: Using the Breakout Groups function, students were randomly paired with another student in order to engage in a video-enabled 'speed-date exercise' to increase socialisation. They were asked to share with their partner, in a series of five-minute rounds, topics, such as my study space, their home country's education system, prior experience in undertaking research, and their fears and anxieties about doing research projects in the UK. All attendees of a group shared the whiteboard, files and applications with the rest of their group. In each round, they were re-assigned with a new partner, and successive rounds offered them opportunities not only to see their peers face to face in a virtual environment but also to see a piece of how other students live in their home environments. Later in the module, we used the breakout sessions to share separate research papers directly with the groups so that they can critique, review and learn from each other.
3. *LEGO group sessions*: In order to create a team environment, in which students regard the 'online classroom' as a safe environment to get involved and feel confident in, we introduced 'LEGO' group sessions: 'Learning Together, Engaging Together, Growing Together and Outstanding Together'. These sessions are underpinned by a second author's own international research into socialisation and engagement (Cadden et al. 2020) and supported by findings in the higher education literature (e.g., Marquis et al., 2017; Trowler, 2011), which report that socialising students at an early-stage lead to increased engage-

ment, retention and performance. LEGO group sessions are bi-weekly, bonding sessions, led by students. Since we could not come together in a physical space, students were asked to organise an online session for virtual get-togethers. To cite an example, a group of students decided on a 'Made in 10 minutes' theme, whereby recipes that could be prepared in ten minutes were shared amongst the group on the online platform. All were encouraged to bring along food samples to virtually showcase their favourite items. Everything from homemade crisps, to naan bread and kebabs was brought along to be displayed online. Following this fun-filled informal virtual party, the subsequent LEGO group sessions were conceived as theme-based masterclasses on various aspects from staying safe online to building a great CV to discussions on the best places to go for a walk in Ireland. Before long, students from other courses wanted to join, and a marked increase in student engagement and interest within the lectures was noted.

Stage 3: Exchanging Information

To help students support each other, and to exchange information, we used a range of strategies during this stage, including Mentimeter-Padlet exercises, 'E-Book Learning Tree' and 'research process crossword puzzle'.

4. *Mentimeter-Padlet Exercises*: Since the online platform enabled us to share our desktops, we were able to introduce new interactive exercises remotely. Using Mentimeter, we conducted quiz competitions for student groups on methodological concepts, research processes and data collection methods. Mentimeter is an interactive presentation platform (www.mentimeter.com) with a set of powerful, easy-to-use features that enable teachers to create instant polls, quizzes, word clouds and real-time surveys. Students can interact with teachers anonymously with a smart device. Similarly, we used Padlet, an online noticeboard tool (<https://en-gb.padlet.com>), to encourage collaboration among students. Padlet allows anyone to make post-it notes with images, links, videos and documents, and helps users to create a digital 'wall' in real time. Everyone can see what posts are

being created by others on the wall and the resulting noticeboard has the potential to display the collective efforts of everyone involved. These ‘walls’ can be used for further reflection and learning in online classrooms. We asked students to create a post on a possible topic of interest for their research project. At the end of the exercise, the digital wall helped us understand the range of topics considered by the group. Based on the similarity of the topics, we created peer-mentoring study groups so that those who have got similar interests can study, design projects and give feedback to each other. These exercises fostered engagement, connections and students’ ability to interact with us during the sessions.

- 5. *E-Book Learning Tree*: We created an interactive eBook called ‘E-BoLT’ and positioned it as a central resource vehicle and a structured, methodology learning tool for students. E-BoLT is an acronym for ‘The E-Book Learning Tree’: How to Successfully Research During Challenging Times. Rather than learning materials being sporadic and disjointed, all materials could be coherently and logically connected through the lens of this E-Bolt. It was essential reading for students, as it provided an integrated approach to learning research processes (See Fig. 31.2) with the main trunk illustrating the purpose of manage-

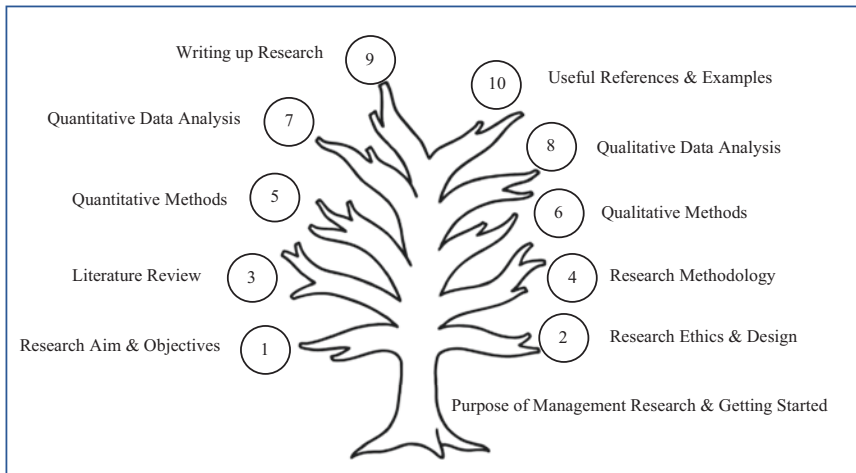


Fig. 31.2 E-BoLT learning tree

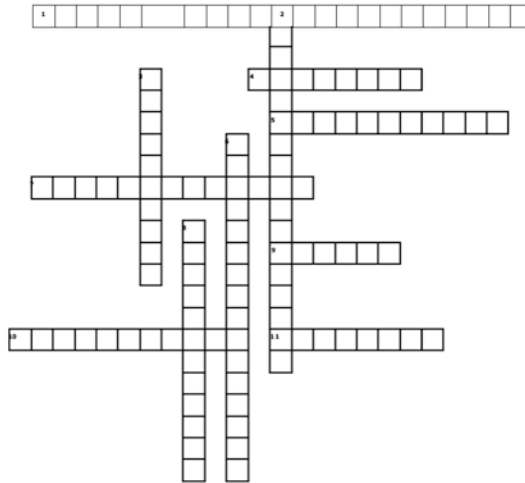
ment research that connects the various processes of doing disciplinary research. This online tree further allowed students to choose differing branches to develop their learning in bitesize chunks. We used this tree to help students see the interconnection between various components of the research processes.

6. *Crossword puzzles and virtual cricket*: Using Crossword Labs (<https://crosswordlabs.com>), an online Crossword Puzzle creator, we created a 'Research Process Crossword' (see Fig. 31.3) to encourage further engagement. Students completed this puzzle to familiarise themselves with key research terminology.

On other occasions, to help them familiarise various research terms, such as triangulation, we played a game of virtual cricket. In this game, students were given the number of letters in the word (represented as dashes on the whiteboard). A set of cricket stumps were drawn on the whiteboard with bails on top. The students had to guess a letter each time. If they got the letter correct, a cricket ball was drawn being thrown at the stumps and hitting the stumps and it was 1-0 to the students. If they guessed a letter that was incorrect, then the cricket ball was drawn with a line missing the stumps and the tutor got a point. If the students didn't guess by the time an over (six balls) were thrown, the tutor won. This is another example of creatively using the whiteboard within the Blackboard platform.

Stage 4: Constructing Knowledge

7. *Our own publications as core texts*: To develop confidence among learners about the various elements of the research process, identified in the Learning Tree eBook, we used strategies such as an online literature review using our own texts, online software and researchers-as-mentors. By utilising the Guest Access function within the online platform, we invited subject librarians to join the classroom to teach about systematic literature search strategies. As suggested by Remler and Van Ryzin (2014), we reviewed academic papers each week on



Down:

- 2. describe what we expect to achieve by a project.
- 3. a group interview involving a small number of demographically similar people.
- 6. a search and evaluation of the available literature in your given subject or chosen topic area.
- 8. research involving the process of collecting and analysing numerical data

Across:

- 1. a meeting in which the interviewer does not strictly follow a formalised list of questions
- 4. the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions
- 5. the degree to which research method produces stable and consistent results
- 7. the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena
- 9. the moral principles that govern how researchers should carry out their work
- 10. research involving collecting and analysing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences
- 11. How accurately it measures what it is intended to measure

Fig. 31.3 Research process crossword puzzle

topics such as causation, correlation, sampling and triangulation. We were able to give them a realistic view of constructing knowledge in business and management and we allowed them to learn from the trials and errors that we faced. During this stage, in addition to the activities mentioned in Seligman (2020) and Dawson (2016), we also

shared our own publications (e.g., Joseph-Richard et al., 2021a, 2021b; Cadden et al. 2020) and made the research visible. By connecting them with our own studies, we encouraged them to critique our works fearlessly. We shared with them our personal experience of what it is like to actually do research and how messy the process and writing up research could be. We shared with them the challenges and struggles that we had experienced in publishing our works. Using online news articles about a poll on a topic of interest (e.g., vaccination anxiety and election results), we highlighted sampling topics by asking questions. What is the population of interest that the poll aims to represent? How was the sample selected? Is there possible coverage or nonresponse bias? How might this influence the obtained results?

8. *Demonstrating data analysis software*: Using the 'Share Application/Screen' function, we demonstrated how we employed applications such as SPSS, NVivo and Qualtrics in our work. With the help of our own datasets, we showed them how one can reduce the potential for human error in quantitative analysis and increase the speed of the research process. With the help of these tech tools, we were able to teach them how coding, content analysis and data visualisation can be done and how we managed huge amounts of data and improved the validity and auditability of qualitative studies. Through these strategies, we helped them learn what they need to know, what they need to do, and where they, as masters students, are positioned in the research landscape.
9. *Personalised support from Researcher-Mentors*: A team of 12 lecturers mentored the students throughout the module. At the beginning of the module, students in small groups of three to five were linked with a research-active lecturer so that they can learn directly from the nuts and bolts of undertaking systematic empirical studies. Regular tutorial sessions were organised by these mentors to ensure that personalised dissertation-support was given to every student. These mentors taught the art of doing business and management research from their immediate research experience, and with enthusiasm for the subject, and thus offered a unique experience of learning research methods.

Stage 5—Development: ‘Learn More—Do More’ tasks, Summary Podcasts, Studiosity Feedback

Salmon (2000) recommends that students must be supported in all stages, as they build up expertise in learning online. Specifically, in Stage 5, a high-level of ‘supporting and responding’ to students’ emerging needs is prescribed, as they look for more benefits from online learning. Students wanted additional help in completing their dissertations on time, and in applying their learning in their personal and professional lives. We needed to assist their ongoing reflection and transfer of knowledge so that they can complete the module as confident researchers.

10. *Learn More—Do More*: We provided additional resources aligned to each session for students to develop their learning and skills further. These resources were called ‘Learn More’ and ‘Do More’. The ‘Learn More’ links for each session identified a set of academic papers from journals such as *Organisational Research Methods*, *International Journal of Qualitative Method*, *Journal of Mixed Methods Research*, *Qualitative Inquiry*, *Qualitative Research*, *Survey Research Methods* and *Journal of Business Research*. The ‘Do More’ section, which was focused on kinaesthetic learners, had hyperlinks for a range of e-activities, such as the crossword puzzles and interactive quizzes to further embed their learning.
11. *Summary podcasts*: We produced short video summary podcasts for each online session to help the students to have access to key weekly learnings. These bitesize podcasts included detailed instructions for the pre-lecture activities that students were required to complete before the following session.
12. *Studiosity*: Our institution has provided access to Studiosity (<https://www.studiosity.com>)—an online academic writing support company, and students can access it for free as part of their enrolment from within the Blackboard Learning Management System using their log-in IDs. We encouraged all our students to submit their assessment drafts to get feedback from Studiosity and this intentional advocacy helped the international students to improve confidence in their writing, and to obtain better grades.

Formative Evaluation as an integral part of Stage 5: Instant Polls and 1-Minute-2-slides Presentation: To feedforward our comments, we used several formative evaluation strategies. We used the ‘Instant Poll’ functionality to confirm that there were learning gains. These polls showed instantly if key concepts were being understood. Additionally, at the start of each week, students were broken into small groups and were asked to ‘speed present’ (i.e., in 15-minutes, each group has to compile two slides—one on ‘what did we learn last week’ and another on ‘what do we want from our tutors’). These presentations gave us instant insights into how the learning happened, and how it was being applied both in their assessment task and in their professional lives outside the module. Collectively, these strategies made the seemingly boring research methods class engaging and interesting.

Evaluation: Success Case Method

Module evaluation data showed that student satisfaction rose by a mean of 98% (with a variance of 0.065) from 72%; student pass rates rose from a mean of 67% to 100% (with a variance of 0.089); and student engagement and involvement using validated measures rose from 37% to 89% (with a variance of 0.061). To further evaluate the effectiveness of our strategies, we used a ‘Success Case Method’ (SCM) (Brinkerhoff, 2003)—a method of finding out what is working and what is not by contrasting extreme cases of positive impact and nil impact. In this method, evaluators aim to highlight the impact variation experienced by successful and unsuccessful adopters of a programme by using storytelling techniques. It focuses on four basic types of evaluative questions: (i) What is really happening in the programme? (ii) What results are being achieved? (iii) What is the value of perceived results? (iv) How can the programme be improved? Brinkerhoff (2003) suggests that through a survey, evaluators should identify a small group of successful cases (individuals who experience positive effects of the module) and interview them in order to understand what worked for them. Then, they interview another sample of people who found either no value or a negative value of the module. They then document what did not work for them and

why. Finally, evaluators compare the stories and report the results. Although this method is not intended to produce a comprehensive judgement on a programme's merit or worth, it is suitable for all types of programmes, and it is a relatively simple, cheap and quick way of finding out what works and what doesn't work with reasonable rigour and accuracy; therefore, it is deemed suitable for this module evaluation. Data collected from a purposive sample of six students were narratively analysed, and they are presented below with their pseudonyms and brief quotes.

What Worked for Those Who Found the e-RIT Useful?

Three students, who successfully completed the assessments on time and scored higher marks in this module, identified that our interactive teaching methods, interactions with research-active staff and the social support gained from their peers helped them learn better and increase their confidence in research skills:

When I heard [that] I had to study management research, I was far from motivated. I studied this back in India and I found it terribly boring as a subject. Lecturer X made it so interesting, and I learned so much. We lead class discussions, presentations and perform practical assignments. I will never forget this class! (Narayanan)

Being in a class with a mix of international students online made me wonder how it would work, and how I would integrate. I am very shy by nature. I was really scared. Starting off by working in groups and writing hello and welcome in our native languages allowed us to feel at ease. I have grown in confidence each week and am now very comfortable with difficult research terms and more than happy to present in front of my peers! (Gupta)

I liked the Chat function. Previously I never had a chance to speak to my lecturers directly during the lecture. I liked the eBook. It offered coherence to [the] module and I understood that learning to do a piece of research is much more than just learning about a survey or interview. The skills I learnt here are in use daily in my professional work. You could create

another eBook on how to do a piece of research only by using secondary sources alone. (Maria)

What did not work for those who found the module less useful/valuable? Three students (i.e., two of them scored a low mark in their assessments and one withdrew from the module) pointed out that there is a need for additional support for narrowing down the research topic and for doing secondary research online. The student who withdrew highlighted the fact that, despite the module being relevant, there was a burden undertaking this module from home, where they had to balance home schooling, caring, work and learning, and that was challenging.

Learning Points

- Learning research methods can be interesting even in lockdown: With the use of student-centred pedagogic ‘hooks’, research methods education can be made useful and engaging.
- Learner engagement can be enhanced through a thoughtful module design: When module design is theory-based, authentic and inclusive, learner engagement increases.
- Innovate: Engage with learners in new ways that excite them in virtual classrooms, so that they could see that active researchers and research experiences are at the heart of learning.

Conclusion

In this chapter, we present our experience of performing RIT using technology. Since there is relatively little descriptive research on delivering research-informed teaching during a pandemic, this chapter contributes to addressing that gap. It identifies 12 different pedagogical strategies for teaching research methods in an online environment. We conclude that it is possible to make research methods teaching engaging, even in an online environment, and that a thoughtful module design could make students become confident, creative and competent users of research

methods. Although the evaluation indicates that, for some, learning in lockdown had presented personal and professional challenges that could never be addressed only by technology-enhanced teaching, it was shown that for most of our learners, our approach has produced meaningful outcomes. As we learn to live with pandemic induced challenges, institutions have to become even more responsive to learning needs of the students (Toquero, 2020). Since they are moving more and more towards online learning (Ali, 2020), the strategies presented here may prove useful across international borders, when teaching research methods remotely. Learning from the evaluation, we published an eBook *Secondary Data for Management Research: A Help Guide for Staff and Students* (Cadden, 2020), and we extended our student support to build their confidence in doing research remotely to post-COVID contexts.

References

- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3), 16–25.
- Almpanis, T., & Joseph-Richard, P. (2022). Lecturing from home: Exploring academic experiences of Emergency Remote Teaching during a pandemic. *International Journal of Educational Research Open*, 3, 100133.
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113–115.
- Berry, K. (1998). Reclaiming wonder: Young students as researchers. In S. Steinberg & J. Kincheloe (Eds.), *Students as researchers: Creating classrooms that matter*. The Falmer Press.
- Brinkerhoff, R. (2003). *The success case method: Find out quickly what's working and what's not*. Berrett-Koehler Publishers.
- Cadden, T. (2020). *Secondary data for management research: A help guide for staff and students*. Ulster University Business School.
- Cadden, T., Cao, G., Yang, Y., McKittrick, A., McIvor, R., & Onofrei, G. (2020). The effect of buyers' socialization efforts on the culture of their key strategic supplier and its impact on supplier operational performance. *Production Planning & Control*. <https://doi.org/10.1080/09537287.2020.1785574>

- Dawson, C. (2016). *100 activities for teaching research methods*. Sage.
- Earley, M. A. (2014). A synthesis of the literature on research methods education. *Teaching in Higher Education*, 19(3), 242–253.
- Elliott, J. G. (2014). Lessons from abroad: Whatever happened to pedagogy? *Comparative Education*, 50(1), 27–44.
- Farrell, O., & Brunton, J. (2020). A balancing act: A window into online student engagement experiences. *International Journal of Educational Technology in Higher Education*, 17, 1–19.
- Healey, M. (2005). Linking research and teaching: Exploring disciplinary spaces and the role of inquiry-based learning. In R. Barnett (Ed.), *Reshaping the university: New relationships between research, scholarship and teaching* (pp. 67–78). McGraw-Hill/Open University Press.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. EDUCAUSE Review. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Joseph-Richard, P., Almpanis, T., Wu, Q., & Jamil, M. G. (2021a). Does research-informed teaching transform academic practice? Revealing a RIT mindset through impact analysis. *British Educational Research Journal*, 47(1), 226–245.
- Joseph-Richard, P., & Jessop, T. (2020). A phenomenographic study of research informed teaching through the eyes of Masters' students. *Studies in Higher Education*, 45(4), 847–861.
- Joseph-Richard, P., Uhomobhi, J., & Jaffrey, A. (2021b). Predictive learning analytics and the creation of emotionally adaptive learning environments in higher education institutions: A study of students' affect responses. *International Journal of Information and Learning Technology*. <https://doi.org/10.1108/IJILT-05-2020-0077>
- Kilburn, D., Nind, M., & Wiles, R. (2014). Learning as researchers and teachers: The development of a pedagogical culture for social science research methods? *British Journal of Educational Studies*, 62(2), 191–207.
- Lewthwaite, S., & Nind, M. (2016). Teaching Research Methods in the Social Sciences: Expert Perspectives on Pedagogy and Practice. *British Journal of Educational Studies*, 64(4), 413–430.
- Marquis, E., Black, C., & Healey, M. (2017). Responding to the challenges of student-staff partnership: The reflections of participants at an international summer institute. *Teaching in Higher Education*, online first. <https://doi.org/10.1080/13562517.2017.1289510>.

- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Pfeffer, C. A., & Rogalin, C. L. (2012). Three strategies for teaching research methods. *Teaching Sociology*, 40(4), 368–376.
- Remler, D. K., & Van Ryzin, G. G. (2014). *Research methods in practice: Strategies for description and causation*. Sage Publications.
- Salmon, G. (2000). *E-moderating: the key to teaching and learning online*. Kogan Page.
- Salmon, G. (2013). *E-tivities: The key to active online learning*. Routledge.
- Seligman, R. A. (2020). *How to teach a course in research methods for psychology Students*. Springer.
- Toquero, C. M. (2020). Challenges and opportunities for higher education amid the COVID-19 pandemic: The Philippine context. *Pedagogical Research*, 5(4), em0063.
- Trowler, V. (2011). *Student engagement literature review*. The Higher Education Academy.



32

Enabling Dynamic Landscapes through Stop Motion Animation

Sara Padgett Kjaersgaard

Introduction

The design studio is core to many professional design pedagogies, including architecture, landscape architecture, interior architecture and product design (Gray & Smith, 2016). Design studios are a hallmark of design education because they prepare students for the real-world application of responding to a problem (the brief) with a design solution (Schön, 1985). Design studios are almost always outward facing, engaging in real problems with communities and their settings. In-action, in the context of the design studio, can be described as a type of engaged action-based research, because the experiences of learning and knowing are recognised as new knowledge acquisition (Deming & Swaffield, 2011). Therefore, we can position in-action to describe the range of design methods and processes undertaken by students to respond to and communicate a design solution. In this way in-action is as much about the student participating in

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problem solving, reflexivity and making (Schön, 1983) as it is about the impact and efficacy of design to create change. In-action describes a replicable process that does not yield the same design response in different contexts, rather provides several critical pathways to solve a design problem. This chapter focuses on in-action in the context of a shift in learning undertaken because of limitations placed on design studio pedagogies because of the COVID-19 pandemic. It explains this shift in design representation and presentation modes from pin-up, to animation, using the Stop Motion Studio application (app) for smartphones, in a first-year, undergraduate landscape architecture studio at the University of New South Wales (UNSW), Sydney. Stop Motion Studio was selected because it is a free application, compatible with numerous smartphone platforms, has an extensive set of functions, and is easy to use. Similar smartphone applications include FilmoraPro, Movavi Video Editor and iKITMovie. While animation initially presented as a novel solution to the conditions of the pandemic, the results demonstrate the benefit of continuing to incorporate animation modes to enliven analogue drawings within first-year landscape studio pedagogy.

Educational Perspectives of Design Studio

Design thinking often arises from ill-defined problems and it is through thinking and drawing, as critical inquiry, that a solution can arise. The formation of critical inquiry in a design studio is generated through iterative design. Iterative design is the repetition of design processes informed by new information, derived from the site, the client or feedback from peers and studio tutors. Iteration is an important process within design thinking because it is both reflective and process-driven while always remaining solution-orientated. In first-year undergraduate design studios, students use a range of analogue techniques to undertake iterative design processes. Analogue techniques include 2D and 3D sketching and drafting by hand on trace, butter or cartridge paper, as well as model making using card and foam board. Digital technologies may support these analogue techniques to enable further form generation (e.g. Photoshop, SketchUp, AutoCAD or Rhinoceros) or digitally lay out

finished analogue drawings (e.g. Adobe Illustrator or InDesign). Iteration is student centred as students ‘learn by doing’ through the repetitive exploration of analogue and digital representations. Whatever method employed, drawing generation is inherently iterative.

Cennamo proposes that iterative design is as much about how the learning approach is structured as well as how the learning approach is solved (Cennamo, 2016). A common approach to studio learning is the physical structure of the studio environment. Design studios usually occur in larger, open learning spaces, with flat desks that can be reconfigured into small workstations, allowing students to interact directly with their peers. Studio spaces inherently reflect universal design for learning (UDL) principles where interaction allows flexibility in what we teach, how we learn and why we are motivated (Moore et al., 2007). In this type of learning environment, open discussion and dialogue is promoted. While studio tutors can move between workstations and provide feedback with a small number of students at any one time, students are encouraged to converse in ongoing dialogue and critique with one another without the tutor having to direct these conversations. Through this type of approach, experiential learning is heightened because students’ learning in the design studio is both synchronous and asynchronous. Furthermore, asynchronous learning becomes elevated outside of the design studio because students undertake further research and development (iteration) of their design schemes before they next meet to review their weekly milestones.

Design education, specifically studio teaching and learning, is unique. It encourages flipped and blended learning approaches because at its core is the pursuit of considered, innovative and practical solutions for real-world-based problems (Park, 2020). Students are placed at the centre and blended approaches naturally support design studio-based inquiry. Ultimately design studios are opportunities for transformative learning because knowledge is produced, not disseminated (Mezirow, 1997; Kolko, 2012). The use of a diverse range of analogue and digital technologies within design studios, coupled with the design studio setting supports transformative learning. In 2020, the COVID-19 pandemic disrupted the normative processes of ‘in-action’ employed within the design studio. As a result, the pandemic forced design studio educators to adapt quickly to engage students in other ways.

Landscape Architecture and Stop Motion Animation

Landscape Architecture Representation

Landscape architecture representation encourages plans, sections and perspectives as the main sequence of drawings used to communicate a design scheme (Marcinkoski, 2015). In an increasingly digitised world, landscape architecture as a discipline has begun to develop and explore the possibilities that digital technologies render for representation in the field and for landscape architecture design (Amoroso, 2012, 2015). However, while these tools assist us to expand our thinking, they have also made it harder and harder to distinguish each individual designer and their own work. For this reason, it is important to develop analogue drawing techniques (from hand drawing and collage on cartridge and trace paper, to physical model making), to enable and support each student's unique style to emerge and develop before they engage with digital technologies.

Landscape Architecture Design Studios

Design studios are the core of landscape architecture curriculum at UNSW, with technology and history and theory courses playing a supporting role. This format is common to all accredited landscape architecture programmes within Australia and internationally. Since 2017, the author has been leading the first-year 'Design Fundamentals' design studio of the undergraduate landscape architecture programme at UNSW, Sydney. One of two projects undertaken within this studio is titled the 'Imagined Landscape'. The 'Imagined Landscape' is a design project that uses a narrative approach as the basic framework to interpret a literary source into a designed space (Potteiger & Purinton, 1998). The novella, *The Little Prince* (De Saint-Exupery, 1974), is one of the world's most widely translated stories and is used as the departure point for the studio project. French author, De Saint-Exupery, wrote the text during the fall of France to Germany in the Second World War. The text employs literary

techniques of fable, allegory and parable through the exploration of friendship, human morality and the human imagination. The aim of this project is for students to explore the tactile analogue making of landscape form and space, derived from studies of the text, through iterative model making, drawing and design critique. That is, students identify and interpret shapes, structures, forms, and functions located within the text, to create a representative landscape through drawing and model making.

Students are provided with a design brief. The design brief sets the students on a process of discovering, because, as Orr, York and Blair argue, the brief 'is not testing knowledge, it is offering them a means to conduct their own learning and development' (Orr et al., 2014, p. 35). Students are instructed to read the text and interpret the spatial cues located within it to create an imaginary landscape. Due to the physical distancing requirements of COVID-19 in 2020, students were supported with online lectures that explored the theoretical and fundamental principles of landscape design. The lectures were supplemented with YouTube videos that demonstrated the drawing and model-making tasks required for students to undertake iterative design each week. Building upon the fundamental design concepts of Dee (2001), the students created a series of iterative, physical models that represented the moulding and folding of the ground, wall and sky planes to create their 'imagined landscape'.

Students explored what their imagined landscape might look like through drawings at a tangible scale of 1:200 on A3 paper size. This scale was chosen because the corresponding 5 mm foam core board for model making equates to 1 m on the ground and is readily available from art department stores. The students drew plan, section and perspectival images, derived from their white foam core physical model. Students photographed their models to set up their perspectives. Students then printed and scaled their photos to approximately A5 paper size and then placed a layer of white trace paper over the top to trace their perspective image. Students were instructed to create ten perspectival images from their model using this technique.

The illustrative rendering of the ten perspectival images was limited to being monotone only—grey, black or white—so students could adequately consider line weight, texture, tone, contrast, shadow and depth in the development of their drawings. Students were instructed to create

four monotone textures on A4 paper that could be cut and spliced to form a montage of tonal rendering to complement the line work. In this way, the students' drawings became 'composite drawings' because a new image was constructed by composing various images, parts and elements to form a new reality. As Corner concludes, 'Montage creates complex mental images that are as much cognitive, perceptual, verbal, acoustic, or tactile as they are visual; they are eidetic and participate in the shaping of new realities' (Corner, 2014, p. 9). Many of the students produced a series of sophisticated images that demonstrated clear self-development and experiential learning as described by Kolb (1984) in relation to their understanding of landscape.

Prior to the pandemic, students would present their drawings and model via a pin-up presentation in the studio classroom. Studio pin-ups are an important way for students and their peers to engage with their drawing and models in a tactile and convincing way (Oh et al., 2013). Pin-ups are usually undertaken in person, because digital formats can limit the drawing scale and legibility of the work. Furthermore, issues of legibility are compounded when the mode of communication and representation is based on analogue hand drawing and model-making techniques because students must transcribe this information into a digital format. In doing so, often the qualities of the analogue drawing are lost.

While this can be seen as a limitation, the COVID-19 pandemic provided an opportunity to mobilise the student's ten perspective analogue drawings into a short, animated film. Students used Stop Motion Studio (Cateater, 2021) a free mobile animation video app available for download onto smartphones. Students drew and cut out, several scaled 2D images of the Little Prince character and interchanged these (relative to scale in the perspective drawing) to move him through each montaged perspective scene. Students were encouraged to integrate temporal landscape elements (wind, rain, clouds, sun and shadow, night and day) into their montage perspective images. Using the Stop Motion Studio animation app, students took four to six photos of each scene, to track the movement of the prince through each of the perspective images. In total, students had approximately forty to fifty unique scenes to bring together in their animation film. One second intervals were selected as the transition speed between each scene.

A review of the students' satisfaction scores and qualitative feedback reveal opportunities to integrate novel smartphone applications such as Stop Motion Studio, to promote communication of the temporal components of the landscape. In addition, the results outline a broader appreciation of the spatial qualities, scale, and proportion of their designed spaces.

The Study

The purpose of this study was to evaluate the pedagogical impacts on course learning outcomes through a shift in representation for the first studio project undertaken by undergraduate landscape architecture students because of the COVID-19 pandemic in 2020. The first project of the term was scheduled to run for four of the ten weeks in term two and, for this reason, was intentionally short and sharp. Over the first four weeks of term, students were engaged in design tasks that utilised their existing drawing skills and leveraged these skills to create more technical landscape architecture section and perspective drawings and models. Hand-rendering techniques and collage were introduced into the studio to ensure students understand the basic principles of composition—line, shape, proportion and scale, form, space and tone and texture, prior to them producing drawings via digital programmes such as AutoCAD, SketchUp and Adobe Photoshop in subsequent studios. The first project is also the first time students in the landscape architecture programme have been asked to respond to a design brief. Reading and responding to a design brief and the requirements set forth is a learnt task, because students must understand how the studio brief intersects with the broader canon of landscape architecture and, at the same time, how the processes employed within the studio develop their technical aptitude. In this studio, students were introduced to the fundamental principles, elements and strategies as they relate to landscape architecture. Of these, the study of narrative and the creation of a narrative in their designed landscape, references long-held traditions of landscape architecture planning and design that enable historical and cultural messages of a particular place to be conveyed—real or imagined.

This first project addressed three of the four learning outcomes for the design studio:

Apply fundamental landscape architectural design principles, strategies and processes in meaningful and creative ways to a given design brief,

Identify and manipulate landscape elements and forms to create coherent designed landscapes, and

Explore, develop, and explain design concepts, principles and processes effectively using visual, digital and verbal presentation modes. (UNSW, 2021)

The objectives of this study were to determine if the learning outcomes were still achieved through modifications made to the project's representation processes due to the shift to online learning.

Method

Forty-five first-year undergraduate students enrolled in the landscape architecture studio at UNSW Sydney were invited to participate in the evaluation of their experience of using the Stop Motion Studio animation app in the design studio. Two methods of evaluation were used. First, a structured interview approach using an in-class poll at the end of the teaching term to determine the impact of Stop Motion Studio technology on the learning and teaching outcomes of the students. The tutors administered the structured questions during the final class using the poll function in Blackboard Collaborate, a plug-in for the learning management software Moodle. The tutors provided the questions in written format on presentation slides, and repeated these verbally, requesting the students to answer the questions using the poll function. The questions required simple yes or no answers, to either affirm or oppose the question that was asked. The 'poll' function within Blackboard Collaborate was used to record the answers and the data tabulated into a Microsoft Excel sheet.

Second, we reviewed and analysed the content of the qualitative data captured by the university-wide *myExperience* course surveys. The *myExperience* course surveys are administered directly to students by the

university central student services team. The surveys are structured using the Likert scale method with the choices ranging from Strongly Agree (rated 5) to Strongly Disagree (rated 1) with a neutral option of Neither Agree nor Disagree (rated 3) offered. Students have the option to provide written feedback to help improve courses, programmes and their overall student experience at UNSW. However, in 2020, the written feedback was limited to two questions. The questions were ‘what have been the best elements of studying online’ and ‘what were the most challenging elements of studying online’. Participation in the *myExperience* Survey is optional.

Student surveys are a reliable source of data because they represent a consistent and repeatable source of data collection undertaken by most universities annually. Student surveys are accessible and theoretically flexible whilst providing data to be compared year to year for the same course, or across institutions for similar types of courses.

Student surveys support feedback processes that centre the student as a partner in the learning and design process. The two-part method employed here in this study mirrors ‘reflection in action’, a student-centred approach to evaluation (Schön, 1983; Peimani & Kamalipour, 2022). Design-based studio courses promote students to critically reflect on their work and experience of design process (Shreeve, 2015). Student surveys can therefore be designed to specifically investigate critical issues at different stages of the design process. Because design process and design outcomes are often open ended, qualitative surveys capture an iterative process of design critique, feedback and authenticity, which is fundamental to professional practice within design disciplines.

Results

Thirty-six of forty-four, or 82% of students enrolled in the course, undertook the in-class poll, with slightly lower numbers, twenty-seven of forty-four, or 61% undertaking the *myExperience* survey. One limitation of this study is we were unable to distinguish if the twenty-seven students who completed the *myExperience* survey also completed the in-class poll.

Of the thirty-six students who participated in the in-class poll, 92% affirmed that the stop motion animation film helped them understand the scale and proportion of the designed spaces within their imagined landscape. About 89% believed that their drawings and physical model were enhanced using the Stop Motion Studio application. These results suggest that all three course learning outcomes were achieved. First, that the fundamental landscape architectural design principles, strategies and processes were successfully employed and executed successfully so students could understand their own, and their peers design schematic. Second, that the communication of each students design schematic through stop motion animation enabled a strong coherence of the brief, principles, strategies and landscape narrative. Third, that stop motion animation supported and enhanced the visual and digital presentation mode. With a high proportion of students responding positively to their understanding of the principles and strategies of landscape design, and more specifically, the strategy of landscape narrative employed within the studio, how do these results compare to previous years when Stop Motion Studio was not used?

This question is unable to be answered by comparing students perceptions of the project, course learning outcomes, and representation and presentation of their project by in-class pin-up directly between the years of 2019 (before the pandemic) and 2020 (during the pandemic), because there was no in-class poll conducted in 2019. However, it is possible to compare the overall course results from the *myExperience* surveys from 2019 to 2020. The 2020 course results demonstrate evidence of an increase in feeling part of a learning community from 85.1% ($N = 47$) to 92.6% ($N = 27$). Similarly, the 2020 course results demonstrated a small increase in students affirming that the course resources helped them learn from 83.0% ($N = 47$) to 88.9% ($N = 27$). So too was there a significant increase in the relevance of the assessment tasks to the course content from 87.2% ($N = 47$) to 100.00% ($N = 27$).

Evidence of an enhanced learning environment is further evident through the in-class poll results whereby 78% of students agreed that the use of stop motion animation enhanced the learning environment, and

86% confirmed that the Stop Motion Studio app should be used again in the studio environment. A surprising outcome was the impact Stop Motion Studio had on interactions with fellow peers, with 80% of the respondents agreeing that the app enabled them to better interact with their fellow peers and their imagined landscape design.

The 2020 *myExperience* data concluded that of the twenty-seven students surveyed, 92.6% agreed that the online learning activities facilitated their learning and that they felt part of an online learning community. The students were unanimous that the assessment tasks were relevant to the course content. While online learning tasks are different to undertaking learning activities face to face, digital learning tools have been proven to enhance connection, collaboration, and communication and therefore, the exchange of knowledge and information (Fleischmann, 2020). First-year landscape architecture students are most likely to exhibit high levels of digital literacy having used computers, mobile phones and the internet on a daily basis. I argue that these preliminary results support the use of Stop Motion Studio as a valuable learning and teaching tool in a first-year studio environment because it leverages the students existing digital literacy to enhance the learning environment and yields positive student experiences within the design studio.

In response to the question about best elements for studying online, the students made these comments:

Although challenging it has been good in terms of developing creativity and relying on my own intuition and creative style without the influence of others (student).

Being able to spend the most amount of time on drawings....and then use my feedback immediately to improve my work (student).

All the work is available online...so I can re-watch the lectures, tutorials and student presentations (student).

I was a lot more comfortable and less stressed online (student).

While the *myExperience* qualitative data was perhaps too broad to determine precisely the impact that the Stop Motion Studio app had on the learning and teaching environment, it did confirm there was no negative impact.

How Might Stop Motion Animation Prove Long-term Impacts?

From examining the results and outcomes of this study, student feedback and the creative process itself, the following opportunities were observed to inform future approaches to first-year landscape architecture design studios.

Improved Experiential Experience for Students

Balmori argues that video, and in this study, animation, offers long-term kinaesthetic possibilities (Balmori, 2014). How landscape is represented and communicated through animation, and more specifically, animation that is derived from a hybridisation of analogue and digital techniques, provides increased opportunities for students to be aware of the human scale and temporal dimensions of the ever-changing aspect of the environment. Arguably, the use of stop motion animation has positive pedagogical implications for deep learning in a first-year landscape architecture studio (Ceylan et al., 2020). Deep learning arises when transformative knowledge is acquired. Transformative knowledge is achieved when students approach learning by abstracting meaning, interpreting content to see things in a new way and through self-development and change as a person (Marton et al., 1993). The abstraction of the text into landscape form, and the subsequent interpretation of their designed landscape, yielded opportunities for imagination and engagement not seen when this same project was conducted in previous years.

Scaffolding Existing Digital Capabilities to Create a Deeper Student-centred Learning Environment

It is likely that the improved learning outcomes evident from using stop motion animation application in this first-year landscape studio is partly derived from leveraging the students own digital capabilities with smartphone technology. Kerr and Lawson (2020) argue that given the ubiquitous use of mobile technology, design education should be exploring the

possibilities that smartphone devices bring to the learning and teaching environment. Smartphone technology and the accessibility to free apps provides opportunities for students to engage in various non-traditional representation techniques as part of their normative workflow. It is possible that using non-traditional representation techniques such as animation has broader impact for stakeholders too, because the moving image has high legibility for clients and non-designers. For example, over the course of the pandemic, there has been a notable increase in the use of 2D animated digital representation on landscape architecture programme social media platforms such as Instagram (Yu et al., 2021). In these instances, the animation is shown in the form of a GIF. GIF's are in fact a series of looped images that are animated and represent the smallest file size for digital animation. In comparison, stop motion animation is a dynamic digital platform with cinematic qualities that captures and heightens the temporal and ephemeral dimensions of the landscape. Stop motion animation assists students in creating narratives and communicating these narratives through digital storytelling to broader audiences, which creates a richer, student-centred learning environment (Ceylan et al., 2020).

A More Equitable Learning Environment for Culturally Diverse Student Groups

In fact, the use of Stop Motion Studio has the potential to create a better learning environment that is inclusive of diversity and focuses on engaged learning. The animation acts as an engaging mode of delivery that does not have to rely on spoken language to communicate the design (Ceylan et al., 2020). With an increasing number of students in landscape architecture programmes coming from various ethnic and language backgrounds, the tutors found, through observation of student engagement in the presentations, that students were much more encouraging and open to thinking broadly about what they were learning, without the fear of how they might be perceived by their peers. Where the traditional studio pin-up environment can create increased anxiety for students from non-English language backgrounds, this was greatly diminished in this study.

Conclusion

While COVID-19 was the instigator for this shift in the representation and presentation mode of the students' design scheme, it provided with important insights into the promotion of diverse landscape representation techniques as both a tool for teaching and student engagement within a landscape architecture design studio. Furthermore, the studio demonstrated how smartphones and animation applications can be integrated into the studio learning environment in a creative way to build rapport and inclusiveness between peers through the dissemination of the student work via a digital platform. The use of the free smartphone application software platform Stop Motion Studio demonstrated the opportunities that arise when analogue drawing and communication techniques are animated. Importantly, students iterated their final physical model and perspective drawings further than they would have for a pin-up, face-to-face design presentation jury. The various design methods and processes employed within the studio signify student learning in-action through problem solving, reflexivity and making. While the shift to animation originated because of the constraints of studio pin-up critique during the COVID-19 pandemic, what was surprising was how confident the students were at communicating their story through animation rather than verbal presentation. An unexpected key learning outcome was the joy and delight that the temporal landscape elements—for example, rain, sunshine, clouds, day and night—brought to the students' understanding of landscape qualities and landscape meaning in their imagined landscape. In the current intra-COVID new world order, the mimicking of the temporal and ephemeral qualities of landscape, that landscape architecture students have been so detached from for over a year now, is one opportunity that should continue to be harnessed within the design studio environment.

References

- Amoroso, N. (2012). *Digital landscape architecture now*. Thames and Hudson.
- Amoroso, N. (2015). *Representing landscapes: Digital*. Routledge.
- Balmori, D. (2014). *Drawing and reinventing landscape* (1st ed.). Wiley. <https://doi.org/10.1002/9781118830574>

- Cateater. (2021). Stop Motion Studio [Mobile application software]. <http://itunes.apple.com>
- Cennamo, K. S. (2016). What is studio? In E. Boling, R. Schwier, K. Campbell, K. M. Smith, & C. M. Gray (Eds.), *Studio teaching in higher education: Selected design cases* (pp. 248–259). Routledge. <https://doi.org/10.4324/9781315697420>
- Ceylan, S., Sahin, P., Secmen, S., & Elif Somer, M. (2020). An evaluation of online architectural design studios during COVID-19 outbreak. *ArchNet-IJAR*, 15(1), 203–218.
- Corner, J. (2014). Foreword: Composite landscapes. In C. Waldheim & A. Hansen (Eds.), *Composite landscapes: Photomontage and landscape architecture*. Hatje Cantz Verlag.
- De Saint-Exupery, A. (1974). *The little prince* (K. Woods, Trans.) London, Pan Books.
- Dee, C. (2001). *Form and fabric in landscape architecture: A visual introduction*. Spon Press.
- Deming, E. M., & Swaffield, S. (2011). *Landscape architectural research: Inquiry, strategy, design*. John Wiley and Sons, Limited.
- Fleischmann, K. (2020). Online design education: Searching for a middle ground. *Arts and Humanities in Higher Education*, 19(1), 36–57. <https://doi.org/10.1177/1474022218758231>
- Gray, C. M., & Smith, K. M. (2016). Critical views of studio. In E. Boling, R. A. Schwier, C. M. Gray, K. M. Smith, & K. Campbell (Eds.), *Studio teaching in higher education*. Routledge. <https://doi.org/10.4324/9781315697420>
- Kerr, J., & Lawson, G. (2020). Augmented reality in design education: Landscape architecture studies as AR experience. *The International Journal of Art & Design Education*, 39(1), 6–21. <https://doi.org/10.1111/jade.12227>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Prentice-Hall.
- Kolko, J. (2012). Transformative learning in the design studio. *Interactions (New York, N.Y.)*, 19(6), 82–83. <https://doi.org/10.1145/2377783.2377801>
- Marcinkoski, C. (2015). Chunking landscapes. In N. Amoroso (Ed.), *Representing landscapes: Digital* (pp. 109–116). Routledge.
- Marton, F., Dall’Alba, G., & Beaty, E. (1993). Conceptions of learning. *International Journal of Educational Research*, 19, 227–300.
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 74, 5–12. <https://doi.org/10.1002/ace.7401>

- Moore, S., Rose, D., & Meyer, A. (2007). Teaching every student in the digital age: Universal design for learning. *Educational Technology Research and Development*, 55(5), 521–525. <https://doi.org/10.1007/s11423-007-9056-3>
- Oh, Y., Ishizaki, S., Gross, M. D., & Yi-Luen Do, E. (2013). A theoretical framework of design critiquing in architecture studios. *Design Studies*, 34(3), 302–325. <https://doi.org/10.1016/j.destud.2012.08.004>
- Orr, S., Yorke, M., & Blair, B. (2014). The answer is brought about from within you: A student-centred perspective on pedagogy in art and design. *The International Journal of Art & Design Education*, 33(1), 32–45. <https://doi.org/10.1111/j.1476-8070.2014.12008.x>
- Park, S. (2020). Rethinking design studios as an integrative multi-layered collaboration environment. *Journal of Urban Design*, 25(4), 523–550. <https://doi.org/10.1080/13574809.2020.1734449>
- Peimani, N., & Kamalipour, H. (2022). The future of design studio education: Student Experience and perception of blended learning and teaching during the global pandemic. *Education Sciences*, 12(2), 140. <https://doi.org/10.3390/educsci12020140>
- Potteiger, M., & Purinton, J. (1998). *Landscape narratives: Design practices for telling stories*. John Wiley and Sons, Inc.
- Schön, D. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.
- Schön, D. (1985). *The design studio: An exploration of its traditions and potentials*. RIBA Publications for the RIBA Building Industry Trust.
- Shreeve, A. (2015). Signature pedagogies in design. In M. Tovey (Ed.), *Design pedagogy: Developments in art and design education*. Gower Publishing Limited.
- University of New South Wales UNSW. (2021). *LAND2101 course outline* [Course Outline]. New South Wales, Australia.
- Yu, R., Ostwald, M. J., Gu, N., Skates, H., & Feast, S. (2021). Evaluating the effectiveness of online teaching in architecture courses. *Architectural Science Review*. <https://doi.org/10.1080/00038628.2021.1921689>



33

Developing and Evaluating a Virtual Placement: Analysing the Health and Social Needs of a Defined Community during COVID-19

Lucy Stainer, Desi Tait, Emma Böckle,
and Amanda Watson

Introduction

The aim of this chapter is to present the development and evaluation of a novel innovation in nursing education that occurred as the result of the COVID-19 pandemic. The innovation concerned the development of a virtual locality placement which gave students who were unable to engage with a clinical work-based placements, an opportunity to study the health and wellbeing of a local community and explore the biological, psycho-social, economic and environmental factors that were affecting them during the pandemic. The placement was evaluated to determine the overall merit of the innovation in the context of the course learning outcomes

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and quality requirements, and to interpret the experience of the students (participants) who completed the placement. The chapter begins by setting the context of the project and the developmental approach used before discussing the evaluation process and findings.

Contextual Background

On March 23, 2020, the United Kingdom (UK) government in collaboration with the four nations of the UK announced the first lockdown of the COVID-19 pandemic, ordering people to stay at home. The implications of this have been far reaching, impacting on all working practices across the economic community, education in schools, colleges of further education and in higher education. This chapter focuses on the evaluation of an opportunity to maximise the potential for innovation and development during this critical period in a Department of Nursing Science (DNS) within a Faculty of Health and Social Sciences in the South of England. Health and social care practitioners working in the National Health Service (NHS), council supported, private health and social care sectors, contributed extensively to keeping people safe and managing the pandemic. The requirement to continue to run university courses leading to professional registration as a healthcare practitioner, in this case nurses, was paramount in an environment when universities were seeing a rise in applications for the nursing degrees by a third (Universities and Colleges Admissions Service, UCAS, 2021). This increasing interest in nursing came at a time when the Nursing and Midwifery council or NMC (2020) produced emergency standards for nursing and midwifery education that led to the withdrawal of first-year students from clinical placements for safety reasons, while second- and third-year students were offered the option of a paid placement with the NHS to support the healthcare effort during the pandemic.

The challenge the department faced was to achieve actions that would continue to support student nurses to qualification in an environment where traditional work-based learning opportunities for junior students and those with vulnerabilities were not tenable during the period of lockdown. The university programme specifications and NMC (2018)

standards for the nursing programmes require that student nurses complete 2300 hours of work-based learning as an integral part of the programme prior to qualification and registration as a nurse. Work-based learning in this context includes the formal achievement of defined clinical learning objectives together with the implicit, opportunistic and unstructured learning that comes from engaging with a place of work (Attenborough et al., 2019).

In responding to the challenge, the DNS supported the development of a virtual placement for first-, second- and third-year nursing students who were unable to take up the option of paid placements. The number totalled 444 students. According to Attenborough et al. (2019), primary opportunities for work-based learning can include the use of welcome or induction packs, e-learning, workshops and peer teaching, simulation, working alongside a person with professional experience in healthcare, working under supervision and visits with related services or teams. The virtual locality placement was planned to incorporate these primary opportunities with students engaging virtually with registered nurse lecturers in the context of exploring a locality to develop an understanding of the biological, psychosocial, cultural, economic and environmental factors that were impacting on a defined community during the pandemic.

This placement builds upon previous iterations but had specific nuances to support efficacy during the COVID-19 lockdown. Students identified and explored a specific geographical area through online and remote activity for four weeks. Students worked in groups producing an analysis of that area against defined rubrics. The placement created a new role for the nursing academic who coached and assessed students and checked student's wellbeing within weekly meetings: long arm mentoring (Kyte et al., 2018). Students needed to comprehend health promotion, and this process created an opportunity to develop skills related to leadership, empowerment, independence, resilience and digital competence. Thomas and Asselin (2018) argue that developing resilience is an essential requirement of registered nurses and developing this skill through work-based learning is key.

In the past five years, the government in England has prioritised developments towards integrating health and social care. This strategic plan has been outlined in NHS England's (2017) Five Year forward View, the

NHS (2016) Five Year Forward Plan for Mental Health and the NHS (2019) Long-Term Plan. There is a stronger focus on developing a place-based approach to care by alignment of services to meet the needs of a population or community. The purpose of this locality placement was to provide an opportunity for students to engage together virtually, in groups, and to undertake an analysis of a defined community to understand the health and social care needs of a single community in line with the NHS (2019) Long-Term Plan. It was anticipated that as students undertook the virtual placement, they would uncover some of the challenges that both they and their studied communities would face in the gaze of a pandemic, including the impact on the mental stress of health-care workers, the adverse effects on children and adolescents, impacts on older people and those in vulnerable groups (Gayer Anderson et al., 2020).

Evaluation as a Research Approach

It can be argued that the basis of evaluation of professional and academic programmes can be considered at four levels: student reaction, learning, behaviour and outcomes (Kirkpatrick, 1959). The focus of this evaluation was on student reaction and whether the findings from the evaluation supported the quality outcomes for the programmes of study. It can be argued that evaluating the process of implementing change and interpreting the perspective of the participants as the change is implemented offer an opportunity for formative, co-operative and summative evaluation (Scriven, 1967).

In this chapter, the rapid changes that occurred because of the pandemic triggered novel approaches to supporting students' learning in practice and led to the following key questions:

- What do participants experience during their virtual locality placement?
- What is the overall merit of the of the virtual placement and should it be continued?

Sample

A sample size of 444 nursing students, out of a local population of 1200, spread across three undergraduate degree programmes, and three years of study were introduced to the locality placement. The sample comprised the following groups:

- First-year students ($n = 354$) who had been unable to attend placement due to COVID restrictions and NMC Emergency Standards Recommendations (2020)
- Second- and third-year students ($n = 90$) who were unable to opt into the NMC and government-supported paid placement scheme to support the NHS during the pandemic

Data Collection

Data were collected using an online evaluation of placement questionnaire between 11/05/2020 and 11/01/2021. Part of the NMC standards for pre-registration programmes (2018) is to ensure the quality standards for work-based placements or practice learning are met. The evaluation questionnaire was developed based on the quality standards required of all placements including in clinical settings, by simulation or virtual applications. Content and face validity was assessed and agreed by Cross University and Trust partnerships in the South of England and has become the standardised evaluation tool for this area. The questionnaire included 20 questions and used a five-point Likert scale to measure participant responses. The Likert scale identified the highest score with the most positive response and was consistent across all questions (Oppenheim, 1992). The questions were divided into six themes and participants had the opportunity to leave comments after each question. The six themes listed in the questionnaire related to the NMC (2018) quality requirements for clinical placements and are seen in Table 33.1.

Table 33.1 Evaluation of practice questionnaire, themes and questions

Themes	Questions
1 Learner induction skills and preparation	1. The quality of the university/education provider's preparation pre-placement was excellent 2. There was excellent pre-placement information about the placement area 3. My own preparation for the placement was thorough 4. My local induction to this placement was excellent
2 Quality of mentorship/supervision and role models in practice education	5. My supervisor understood my assessment requirements 6. I had an opportunity to negotiate my learning objectives at the start of the placement 7. I had opportunities for regular (weekly) discussion and reflection on my clinical practice 8. I received constructive feedback about my learning 9. I felt supported by my supervisor on this placement to make improvement in the care I deliver 10. Overall, the quality of the supervision I have received on this placement was excellent
3 Quality of learning experience and learning opportunities	11. I was challenged to use evidence to underpin the care and treatment I offered 12. Placement resources maximised my learning opportunities on this placement 13. Overall, I was provided a range of learning opportunities which were appropriate to meeting my learning outcomes
4 Quality of team leadership, workplace culture and support for learners	14. The leadership of this team demonstrated a positive culture for my learning and development 15. The team addressed feedback from learners 16. The team valued my role in contributing to the delivery of high standards on this placement
5 Interprofessional learning and working	17. I witnessed excellent communication between team members and other professionals to deliver high quality care which had a positive impact on my learning. 18. I had appropriate opportunities to experience interprofessional and interagency working
6 Quality of service user experience	19. I was encouraged to reflect on aspects of good care and to suggest how care could be improved 20. There is clear information about where to go for support both in the placement and university

Ethical Considerations

Students are asked to complete the online evaluation tool at the end of each placement to meet university, placement partners' and NMC requirements. Information concerning the purpose of the tool was explained prior to the students completing the questionnaire together with an explanation of how the data will be used to review the quality of the placement provision and to inform the development of new and novel placement opportunities. In relation to this evaluation, students were made aware that this was the first virtual placement we had developed, and they were able to opt-in or out of the evaluation by choosing to complete the questionnaire.

Data Analysis

Quantitative ordinal data from the questionnaire were analysed using descriptive statistics with Microsoft Office 365, Excel, and aggregated according to the six themes identified in the questionnaire (Table 33.1). Mapping of those questions that produced the most positive responses have been highlighted together with those questions that produced fewer positive responses. The approach taken to analyse the qualitative responses from students as participants was thematic analysis (Vaismoradi et al., 2013). This method was used to identify codes and patterns within the data leading to the development and refining of themes (Braun & Clarke, 2006). This has been suggested as a flexible and useful research tool to provide a rich and detailed yet complex account of data. The findings were then examined the context of both qualitative and qualitative findings.

Findings

During the period of data collection, 185 questionnaires were completed comprising 42% of the sample. Students in their final year completed their degree during the period of data collection and did not take part in

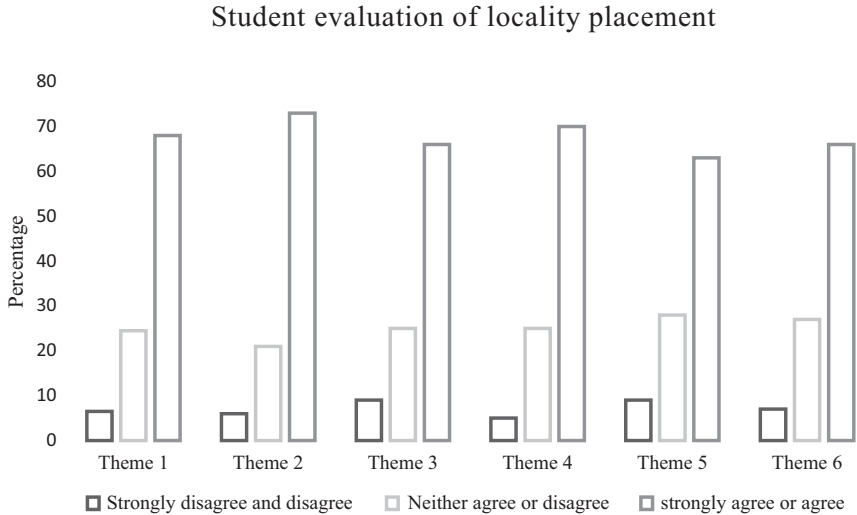


Fig. 33.1 Bar chart of student evaluations according to theme

the evaluation process. A revised response rate of 44% was calculated with this student group removed (Fig. 33.1).

Overall, the quantitative findings from student evaluations were positive with a mean score of 68% in support of the virtual placement across the six themes identified. Examination of responses to questions in individual themes revealed that students rated theme five, interprofessional working and learning, less highly when compared to the responses to the other themes. Theme five focused on the ability to witness professionals working across teams to deliver high quality patient care ($n = 67\%$), and opportunities to experience interprofessional and interagency working ($n = 59\%$). The theme rated most highly by the students was theme two: the quality of mentorship, supervision and excellent role models in practice education. In these findings the students rated the practice educator as understanding their assessment requirements most highly ($n = 77\%$). Statement seven was the most highly rated statement (Table 33.1): I had opportunity for regular (weekly) discussion and reflection on my clinical practice.

Thematic analysis of the open-ended questions identified three themes. These were Knowledge and Understanding, Communication, and Management and Leadership skills.

Theme: Knowledge and Understanding

Students identified that they had learnt much about the importance of the multiple factors healthcare professionals need to be aware of that can impact an individual's health, in particular social determinants of health. This was perceived by the students as a positive aspect of the placement:

The placement was excellent in identifying the strengths and weakness of a locality and how this not just applied to physical and mental health but how it can be associated to many other factors.

Students expressed how this had 'opened their eyes' to understanding the healthcare needs and services of a local area and was invaluable in understanding a community and the socioeconomic links to health:

I have learned, health is influenced by various factors and thus to provide effective and person-centred care the importance of considering these factors. I learnt about the amount of different care services available in the local area which is vital for healthcare professionals to be aware of and refer patients to.

As a placement experience outside traditional placement models, it raised awareness of resources and services both available and lacking for patients in the community. Students identified that 'different skills' were learnt and recognised the opportunity as a move away from 'normal' traditional placements:

This locality placement made we aware of all the resources out there for patients and their families-this will improve the level of care I will provide in the future both for in patient's and on discharge.

It gave me the opportunity to observe first-hand how an individual is affected from the many stressors surrounding their life such as where they

live, the opportunities available and the many other factors that you would normally not observe in a hospital environment.

Whilst most students found the placement to be valuable and much to be gained from the experience, as illustrated in the quantitative findings, some of the students struggled to see the relevance to practical nursing:

The fact that it was a virtual placement did not give students clinical skills opportunities and did not enable us to practice physical care.

This point was reinforced by another student who said:

Not much to learn in terms of nursing

Some students did see the relevance to practical or clinical nursing and identified that it had enabled them to consider the 'bigger picture' when considering care environments for future patients and their families, and had got them out of their 'comfort zone' to learn more about the community and their needs:

It gave me the opportunity to observe first-hand how an individual is affected from the many stressors that surround their life such as the location they live in, the opportunities provided and the many factors that would never normally be observed within a hospital environment.

In addition, it reinforced key theoretical learning around the importance of holistic assessment:

This has been a good experience to transfer assessment skills for an individual in healthcare and apply it to a broader aspect of a whole community. I have learnt that a lot of external and internal factors can contribute to the health and wellbeing of individuals and it is important to assess a patient holistically.

Looking ahead students were able to identify the impact of this learning on their future practice:

Analysing the key issues residents face in their locality allowed us to think about the ways healthcare professionals can improve/work around these issues to provide the best care to our patients.

Theme: Communication

Many students identified the challenges of working online and remotely due to the COVID-19 restrictions. They accepted that while they would have preferred having a face-to-face placement opportunity, they needed to make the most of opportunities available to them. Teamwork and the development of their communication skills were identified as positive attributes from undertaking the placement:

I have learnt the importance of great teamwork and communication skills, these skills will be applicable and essential for nursing care in future placements.

I will take to my next placement the value of team working and involving patients in their care whatever their ability.

Working with peers during the locality placement was identified as a strength and good preparation for working in clinical teams in the future:

Teamwork, communication and facing new scenarios professionally were personally, my strongest skills. This locality placement gave me an opportunity to face new scenarios with individuals I wouldn't normally work with and to problem solve together.

I have learnt it is vital to respect other people's opinions and beliefs and I will carry on practising this along with my enhanced communication skills in my next placement.

Working remotely with access to online resources and communicating via video conferencing was challenging for students and they looked to find solutions while communicating as a team:

We managed to work together as team to find alternatives to gather information using technology. This helped remind me of the importance of

teamwork as it allows you to find solutions to problems that you may face during your working day.

Not being able to visit the locality and interact face-to-face with individuals was identified as a limitation; however, students overcame this with alternative forms of communication and resourcefulness.

Despite the challenges of being online we were all committed to overlooking these difficulties to produce a high-quality document.

Students identified surprise at the success of the placement given the restrictions in place:

This placement was surprisingly great, I enjoyed working in a group and was able to work together and a lot about our chosen area which can be applicable to nursing and our course.

Communication over Skype and Facebook was more interesting rather than meeting up.

Theme: Management and Leadership

Working in small groups of six to seven students enabled students to identify their role within a team and develop leadership, prioritisation, organisation, time management and delegation skills:

This placement was good for managing individual and group expectations and delegation of workload and priorities towards achieving a shared goal.

Students identified they had been able to develop their leadership skills which would be beneficial to take forward into future practice.

I have improved my skills in leadership ensuring everyone is listening and understanding to ensure practice is safe, effective and everyone feels able to contribute, problem solve and self-direct as a functional team.

Communication was the main skill I learnt and improved on taking a leadership role within the team. Meaning I can bring that into my next placement.

Students identified self-growth with the development of key skills that would be fundamental in future practice and academic work:

Growing in confidence. Becoming more autonomous and being enabled to make my own clinical decisions with support.

My academic writing skills have been enhanced, similarly my leadership skills have also improved.

Discussion

Overall, the virtual locality placement was evaluated positively both in the quantitative and qualitative findings. The theme rated most highly identified the value placed by students on the quality of mentorship and support they received during the virtual placement to work through and achieve the clinical outcomes. This finding is consistent findings from international studies where the quality and commitment of mentorship and an effective culture of learning are key to exposing the richness of learning opportunities available to students (Attenborough et al., 2019; Bergjan & Hertel, 2013).

Qualitative findings revealed that while the feedback was positive, some students were surprised by how much they were able to develop and refine skills that can be transferred to more traditional placement settings such as communication, team working, leadership and holistic assessment of individuals in the context of their community. Hospital wards have been the traditional setting for nursing students to achieve practice learning since the advent of the nursing registration in the UK in 1919 and they continue to be a core requirement for clinical learning. However, 100 years later the demographic of countries around the world and their corresponding healthcare challenges have changed with an increasing requirement to support people living in community settings with

co-morbidities and living into old age, with community and economic factors at the forefront of the drive to improve world health (WHO, 2021).

Expanding placement provision through the adoption of contemporary approaches to student nurse placement provision has been a key focus at this university for several years (Harvey & Uren, 2019; Humphries et al., 2020; Hirdle et al., 2020, Keeley et al., 2020). This has been in response to the ongoing challenges of accessing sufficient placement capacity from the usual sources (e.g. within hospitals, community services, care homes and special schools). The continuing requirement to increase student nurse numbers, enhanced over the period of the pandemic, has also amplified the need to consider alternative placement provision with placements in traditional settings.

While these are significant drivers, the need to offer a more diverse and contemporary approach to placement provision for future healthcare professionals is a valid pursuit, not only to ensure that the required quantity of placements is available but also to ensure that the preparation a student encounters enables them to develop the knowledge, skills and attitudes required by their awarding body. The pull towards continued placements in traditional settings are an obvious route to continue and is often seen as preferable to support acquisition of skills (Björk et al., 2014). The findings of this evaluation, however, suggest that exposing students to less obvious placement experiences can lead to increased awareness of health and social factors affecting the population.

Increasingly, the professional standards required to prepare future healthcare professionals highlight that traditional placement models cannot fully prepare students to the required standard. For example, within nursing programmes, there is an increasing emphasis on the graduate nurse being able to function as an autonomous professional with leadership ability at the point of registration (NMC, 2018). This argument has been supported by the findings of this evaluation where junior and senior students were able to recognise the value of developing their leadership and management skills while completing the virtual placement.

For pre-registration nursing programmes in this institution, the local placement is part of the validated programme and will therefore continue once the COVID-19 pandemic has ended, either in its virtual form or using a community-based model. The implementation of this

placement during the pandemic has provided greater understanding of the opportunities this provision can bring. While recognising that it is only effective as part of the overall student placement trajectory, complementing traditional and other emerging placement experiences. The placement also has value in the provision it can give for students who are not able to access a traditional placement at a point in their programme. This plan also supports the inclusivity agenda, and while not a replacement for all placement experiences, can provide a facet that could assist an individual to consider a programme when previously they may have not been able to.

The need to expand alternative placement experiences is necessary, as healthcare is unlikely to revert to its pre-COVID-19 ways of delivering healthcare education. The development of technology-enhanced care services has transformed the way some care is delivered, and again this facet of healthcare will require healthcare professionals of the future to develop these skills (Nuffield Trust, 2020). The virtual placement reflects an element of this and can form part of the suite of contemporary placement experiences going forward.

However, students and academics will continue to require preparation and assistance to understand the benefits of this placement. Analysis of the placement evaluation highlights the need to set clear objectives and realistic expectations for students so that they see the placement as part of a larger map of practice learning experiences that will assist in the achievement of proficiencies for registered nurses.

Conclusion

This evaluation relates to one period when the team responded to the impact of the pandemic. Future evaluations will be able to compare the findings from those studies to this period, to determine if the students' experiences change over time. The evaluation included the study of a single cohort in one university and future work should explore the use of virtual placements in the wider professional and academic healthcare field. The low response rate of 44% limits the validity of the quantitative findings; however, the impact of social desirability bias was reduced by

clarifying that completing the questionnaire will not impact the assessment of the final report. Future evaluations are needed to consider the long-term impact this placement may have upon students understanding of public health and the development of their professional attitude. The virtual locality placement has provided a safe practice learning environment during a period of immense uncertainty for students with many university courses being significantly disrupted. It provided a route for nursing students to continue with their course towards becoming a registered nurse. It is the intention of the university that this placement model will remain. The vision would be to use virtual technology to engage with a range of healthcare programmes at this university, and the structures that support placement provision so that students from a variety of healthcare settings can work together in this placement to provide a stronger interprofessional perspective.

References

- Attenborough, J., Abbot, S., Brook, J., & Knight, R. (2019). Everywhere and nowhere: Work based learning in healthcare education. *Nurse Education in Practice, 36*, 132–138.
- Bergjan, M., & Hertel, F. (2013). Evaluating students' perception of their clinical placements—Testing the clinical learning environment and supervision and nurse teacher scale in Germany. *Nurse Education Today, 33*, 1393–1398.
- Bjørk, I., Berntsen, K., Brynildsen, G., & Hestetun, M. (2014). Nursing students' perceptions of their clinical learning environment in placements outside traditional hospital settings. *Journal of Clinical Nursing, 23*, 2958–2967.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research Psychology, 3*, 77–101.
- Gayer Anderson, C., Latham, R., El Zerbi, C., et al. (2020). *Impacts of social isolation among disadvantaged and vulnerable groups during public health crises*. ESRC (Economic and Social Research Council) Centre for Society & Mental Health, King's College London.
- Harvey, S., & Uren, C. D. (2019). Collaborative learning: Application of the mentorship model for adult nursing students in the acute placement setting. *Nurse Education Today, 74*, 38–40.

- Hirdle, J., Bareham, S., Keeley, S., & Allen, L. (2020). A collaborative learning model for student nurses in child mental health. *Nursing Times*, 116(1), 50–52.
- Humphries, B., Keeley, S., Stainer, L., & Watson, A. (2020). An alternative placement model for nursing students: Discovering new horizons. *British Journal of Healthcare Management*, 26, 5.
- Keeley, S., Humphries, B., & Smith, S. (2020). Adapting a learning model to support student nurses in a nursing home. *Nursing Times*, 116(12), 42–44.
- Kirkpatrick, D. (1959). Techniques for evaluating training programmes. *Journal of the American Society of Training Directors*, 13(3–9), 21–26.
- Kyte, R., Frank, H., & Thomas, Y. (2018). Physiotherapy students' experiences of role-emerging placements: A qualitative study. *International Journal Practice-Based Learning in Health & Social Care*, 6(2), 1–13. <https://doi.org/10.18552/ijpbhlsc.v6i2.505>
- NHS. (2016). Five year forward plan for mental health. <https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf>
- NHS. (2017). NHS five year forward view. Retrieved May 11, 2021, from <https://www.england.nhs.uk/five-year-forward-view/>
- NHS. (2019). The NHS long term plan. Retrieved May 11, 2021, from <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>
- Nuffield Trust. (2020). *The impact of COVID-19 on the use of digital technology in the NHS*. Nuffield Trust.
- Nursing and Midwifery Council. (2018). *Part3: Standards for pre-registration nursing programmes*. NMC. <https://nmc.org.uk>
- Nursing and Midwifery Council (NMC). (2020). *Emergency standards for nursing and midwifery education*. NMC.
- Oppenheim, A. (1992). *Questionnaire design, interviewing and attitude measurement* (2nd ed.). Continuum Books.
- Scriven, M. (1967). The methodology of evaluation. In R. Tyler, R. Gagne, & M. Scriven (Eds.), *Perspectives of curriculum evaluation*. Rand McNally.
- Thomas, L. J., & Asselin, M. (2018). Promoting resilience among nursing students in clinical education. *Nurse Education in Practice*, 28, 231–234. <https://doi.org/10.1016/j.nepr.2017.10.001>
- UCAS. (2021). Nursing applications soar as UCAS publishes latest undergraduate applicant analysis. Retrieved May 11, 2021, from <https://www.ucas.com/corporate/news-and-key-documents/news/nursing-applications-soar-ucas-publishes-latest-undergraduate-applicant-analysis>

- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences, 15*, 398–405.
- World health Organisation. (2021). *World Health statistics*. Retrieved August 5, 2021, from <https://www.who.int/data/stories/world-health-statistics-2021-a-visual-summary>



34

Virtual Learning Environments in Hong Kong and the Digital Design Studio: When Needs Must

Claire Bailey-Ross, Martin Andrews,
Mohammad Sami Al Hasan, and Aidan Haestier

Introduction

The social and political developments that unfolded on the streets of Hong Kong (HK) from June 2019 onwards have attracted widespread media attention. Due to the ongoing protests and subsequent COVID-19 outbreak, university campuses in HK were closed to students and staff from November 2019 onwards. When face-to-face interaction was forbidden, traditional methods of engagement needed to be paused and replaced with innovative, creative and technologically driven modes of teaching. This chapter examines the virtual design studio (VDS) that has been adopted at the Caritas Institute of Higher Education (CIHE) in

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Hong Kong and what lessons we can learn to be applied at other higher education virtual design studios.

Caritas Institute of Higher Education is host to an Interior Architecture and Design top-up bachelor programme partnership between HK's Caritas Institute of Higher Education and UK's University of Portsmouth (UoP). The programme curriculum, qualification framework, moderation and awards are provided by UoP, following the UK structure. CIHE delivers the taught programme with contents contextualised for HK's industrial, societal and academic scenario and accredited by HK's QF authorities. Students joining this programme with a prior sub-degree (e.g. higher diploma, associate degree, BTEC HND and similar) and in some cases several years' work experience in related design fields. While the courses are taught by CIHE academic staff members, CIHE and UoP teaching teams collaboratively work on programme's delivery, teaching methodology and assessment. Both teams comprise academic and practitioners from architecture and interior design fields, and design learnings largely follow architectural studio-based approach. The programme is delivered in CIHE campus in Hong Kong, along with the institute's own local programmes across five different schools, where typical design studio and classroom settings are available.

The study involves 19 undergraduate Interior Architecture and Design students reports on the development and implementation of the virtual design studio and examines the student attitudes towards this new digital design teaching methodology when compared to being taught in a traditional physical design studio setting during the period October 2019 to June 2020. This research applies a pragmatic research paradigm enabling the research team to select methods that suit the 'in the wild' (Rogers & Marshall, 2017), real-world practice nature of the context.

Virtual design studios have been explored in the literature to some extent (e.g. Kvan, 2001; Maher et al., 2000); it is however the rapid transition to online learning due to the Hong Kong protests and subsequent COVID-19 pandemic and the impact this has had on both students and staff that is the focus of this research. This case study will be discussed in the wider context of pedagogical theory and practice of architectural and design studio education and whether this radical shift to online learning is part of a paradigm shift which will radically transform educational practice for both students and staff.

Research Context: Architecture Education in Practice

In this chapter, it is important to briefly explain the various methods typically used for teaching architecture to students in Higher Education (HE). These descriptions will provide the necessary context to better understand how students learn but also how teachers teach in architectural education (AE).

Currently, at the University of Portsmouth School of Architecture, and for the UoP BA (Hons) Interior Architecture and Design undergraduate top-up degree being taught at CIHE in Hong Kong (University of Portsmouth, 2021), 50% of the course is design based with the remaining 50% taught through lectures, as represented in Fig. 34.1 (Andrews, 2021a). In the UK AE, this 50% design component is a requirement of the Royal Institute of British Architects for validated schools of architecture (Royal Institute of British Architects, 2021, p. 5) and is also typical of many architecture-related courses. In this way architect-educators are

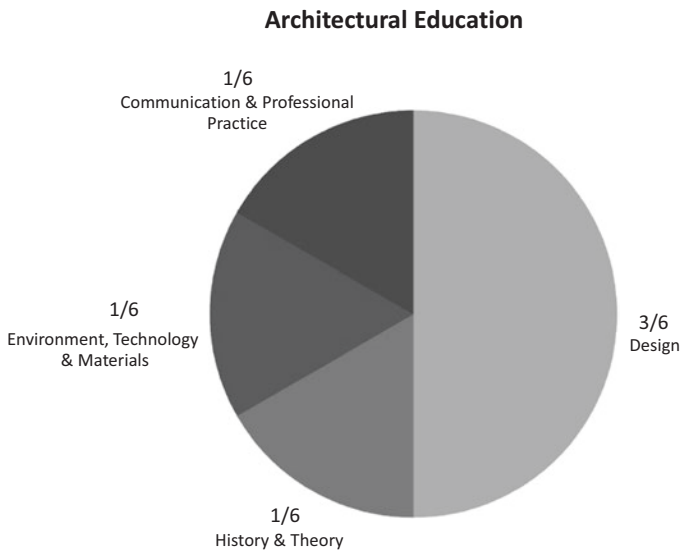


Fig. 34.1 UoP and caritas: ratio of architectural design and architectural lectures

asking students to become independent learners in the design studio while absorbing codified knowledge during their lectures.

Figure 34.1 is a simple representation of how AE is taught at UoP and CIHE. It is tidy, delineated, with no overlaps between subject areas; it does not construe the ‘messes’ that Donald Schön writes of (1985, p. 28). Instead, Fig. 34.2 (Andrews, 2021b) attempts to illustrate the combined aspects of AE, in a different way.

Since the COVID-19 outbreak and the subsequent enforcement of national lockdowns across the UK and Hong Kong, lectures in architecture-specific subjects have taken place synchronously online or in-person or asynchronously through videos and lectures and can be taught to entire cohorts or to small groups of students. Lectures in AE are sometimes termed ‘seminars’ or ‘workshops’; this terminology indicates to the participating students whether there will be substantial interactive elements built into the sessions. Academic educators believe that teaching design in the studio is ‘central and special’ (Potts, 2000, p. 241). Design studio has many names in AE, including, but not limited to, the ‘live’

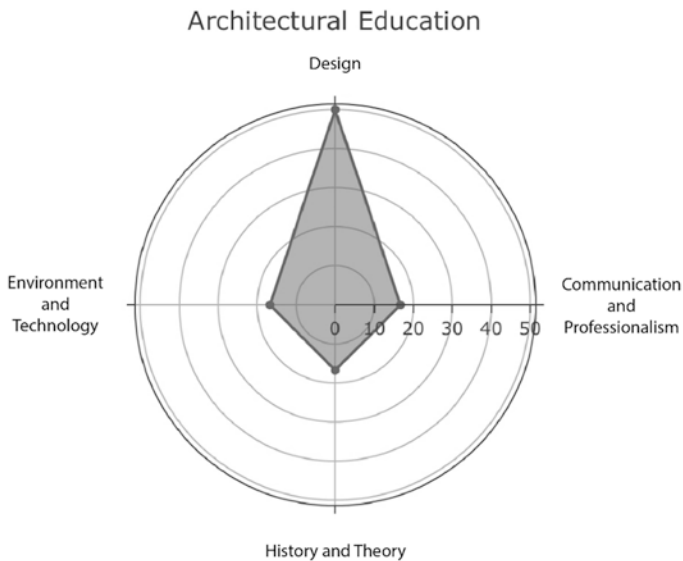


Fig. 34.2 UoP and Caritas: the ‘messes’ of architectural education

project, atelier, unit system, design charrette, design workshop and design competition. Where the assessment of knowledge gleaned from lectures is normally submitted as essays and reports, academic work in the design studio is typically examined through pin-ups (where architecture students print, then physically pin-up their drawings on a pin-board presenting their work to a tutor and small group of students, it is now very common for the 'pin-up' to be digital, where drawings are presented on a large format television screen), 'Crits' (the crit, 'design jury' or 'design review' inhabits a liminal space through which the process of learning architecture and development of professionalism are curated as a rite of passage; 'this pedagogic process is typically centred on the student presenting design work to a panel of tutor and visiting critics and fellow students' [Sara & Parnell, 2020, p. 101], e.g. staged reviews, interim-reviews and final reviews) and portfolios (a collection of physical or digital creative work in a folder that is submitted for examination and marking at the end of a design project in schools of architecture).

Virtual Design Studios

Virtual learning environments (VLEs) are complex information technology systems designed to facilitate teaching and learning, by providing a range of tools required for online learning in one place (for example Moodle, Canvas and Blackboard). VLEs have grown in use since the early 2000s and now with COVID-19 enforcing an emergency 'pivot' to online delivery, almost all universities have an institutional VLE. VLE usage however has predominately been perceived as a remote digital content repository, rather than a space to enhance teaching and learning (Farrelly et al., 2018) and has suffered from the lack of widespread change in pedagogic practices (Browne et al., 2006). Given the pervasiveness of VLEs and digital technologies in higher education there are now expectations on how usage will continue to transform, enhance and support teaching and learning (Selwyn, 2016), particularly given the enforced radical shift to online learning caused by the COVID-19 Pandemic (Torres Martín et al., 2021).

In the Higher Education Architecture and Design teaching setting VLEs have been repurposed to create a virtual design studio. The virtual design studio (VDS) is not a new approach; it has been a part of design and architectural teaching since the mid-1990s (e.g. Wojtowicz, 1995; Shelden et al., 1995; Kvan, 2001; Malins et al., 2003). The term 'VDS' originally encapsulated basic use of internet-based tools to digitise elements of the design studio, but this term has evolved alongside the internet itself. VDS now uses a range of digital tools, services and systems to expand studio space beyond physical and time constraints by typically replicating or supplementing traditional physical design studios (Pektaş, 2015; Jones et al., 2017).

Early depictions of the Virtual Design Studio used Web 1.0 tools and early Web 2.0 tools, focusing more on approaches that used internet databases for rudimentary file sharing, as well as communication through video conferencing and email to allow discussion between students (Shelden et al., 1995). As Web2.0 tools developed, the VDS became much better for accommodating collaboration through online tools such as shared whiteboards and improved interactivity through forums (Kvan, 2001). The core goals of Virtual Design Studio environments remain unchanged; to create a means of management, communication, collaboration and engagement through web-based tools. From this transient core concept comes the extremely versatile nature of the VDS, with many permutations using different toolings and levels of course integrations based on desired studio environments/project outputs. Some examples of recent permutations can be found through Fully Blended Approaches, Social Networked Virtual Design Studio (SNVDS) and Collaboration through digital production tools. The fully blended approach requires students to use both physical and virtual studio environments throughout a project as part of the design learning process (Rodriguez et al., 2018). The SNVDS uses contemporary social media tools to provide optional resources for communication, engagement and collaboration alongside the physical studio environment (Schnabel & Ham, 2012). As the construction industry shifts towards collaborative digital production tools, a VDS component can be created through the use of these tools as part of the tailored curriculum (Ismail et al., 2012). There are many other instances of VDS being used for different purposes, one of these being

enforced remote learning as shown through the case study within this chapter.

COVID-19 Impact on Architecture Education

The COVID-19 pandemic has had a huge impact on approaches to design studio teaching, with varied responses occurring globally based on governmental and institutional policies. In the UK and Hong Kong, the initial lockdown forced all learning to be shifted from physical studio spaces into online virtual environments. This was met with mixed reactions from both staff and students when it came to adjusting to this unfamiliar form of teaching and learning (Wright & Grover, 2020). A year into the pandemic, volatile shifts between varied levels of lockdown restrictions have resulted in many universities having to adopt flexible blended strategies that rapidly adapt to the changing context of HE Teaching and Learning, whilst accommodating students who want to partake in both distanced and face-to-face learning (when possible legally and safely). A variety of tools have been used to deliver the different contents of architectural courses, with the standard for VDS at many universities being to use a mix of pre-existing online course management platforms (i.e. Moodle, Blackboard, Google Classroom, etc.), regular email communication and a video conferencing/communication tool (i.e. Cisco WebEx, Google Hangouts, Zoom, etc.). Each arrangement of tools allows for articulation into different approaches based on the contents of the studio programme, as well as the desired potentialities in student engagement/experience.

The Caritas Institute of Higher Education (CIHE) Virtual Design Studio

CIHE gradually implemented VLE components following an initial set up in 2010 with Moodle and an online consultation tool under two funded-projects (OASISS—Online Advising Support and Interactive

Study System and LOBSTERS—Learning in an Outcome-Based System via Technology and Enhancement of Regulation Strategies). The objectives were to encourage a flipped-classroom approach and to provide distant learning support. As self-funded tertiary institutes (STI), CIHE and its supporting institute CBCC (Caritas Bianchi College of Careers for vocational and sub-degree level programmes) jointly host five schools and a department in the areas of health science, social science, computer science, business, humanities and design. Health science and social science programmes for some instances required distant learning facilities, owing to practicum and field-based learning nature. Design programmes, on other hand, have preferred traditional physical studio and workshop methods for teaching and learning activities with some use of Moodle platform for submission and file sharing purposes.

In the past five years, the CIHE has focused on increasing e-learning capability. As part of the development in early 2019, Zoom and a few more tools and platforms (i.e. Panopto, Mentimeter and Office 365) were introduced as a pilot scheme. Zoom was recommended by CIHE's e-learning workgroup and IT team as a rising tool for two reasons: to handle large group participation in lectures and to facilitate small group online tutorials. It was implemented a few months prior to the 2019–2020 academic year, without knowing that very soon these technologies would be essential locally and globally. The CIHE VDS adopted Zoom and Moodle in combination to teach Interior Architecture and Design students.

Methodology

This study takes a case study approach to discuss the issues around establishing a VDS. Case Studies are a research strategy which focuses on understanding the dynamics present within individual settings to provide an analysis of the content and processes which illuminate the issues being studied (Hartley, 2004). This case study offers a specific example of an approach and understanding of a virtual design studio for architectural and interior design teaching and learning. It is not assumed that the results from this study will necessarily produce determinant

characteristics of all virtual design studios, but rather present a case study which could have implications for other higher education institutions and recommendations which other institutions can adopt if relevant.

The research was focused on gaining an understanding of the effectiveness of the online elements which had to replace the traditional design studio: lectures, studio sessions, crits, tutorials and assessments. The aim was to develop an awareness of the perceptions and experiences that students have of the enforced VDS, as well as how the new digital design teaching methodology compared to being taught in a traditional physical design studio setting. This study therefore obtained perspectives via questionnaires completed by Interior Architecture and Design students.

The student survey was live for the period of one month from 12 July 2020 to 12 August 2020; in that period 19 responses were collected (out of 24 students enrolled on the course). The survey was designed to be answered anonymously, concentrating on gathering data specifically on student experiences of using the virtual design studio, with a focus on student expectations and perspectives of the difference between the virtual and the physical design studio for learning and skills acquisition. Additionally, to better contextualise design student feedback, they were asked about their prior blended and online learning experience. The survey was divided into 19 questions, comprising multiple-choice open-ended questions and free text comments. The web-based questionnaire was developed and designed using Google Forms and delivered via email and WhatsApp.

The collected data were analysed using the techniques and procedures of grounded theory, broadly in accordance with Strauss and Corbin (1998). Central to Grounded Theory is the idea of coding: the linking of phenomena with conceptual labels. The coding process by coding parts of survey feedback that appeared to refer to the same categories of behaviour, opinion or experience and the analysis was refined through a cyclic process of re-reading the data. NVIVO 12 was used for the archiving, coding, and analysis of data.

Findings and Discussion

Student Reactions to the VDS

When interior architecture and design students were asked about their previous experience with a virtual learning experience, 17 (89%) of students had no experience of using or working with a virtual learning environment prior to the shift to the VDS. This is interesting as Moodle, the virtual learning platform, has been in use at CIHE since 2010, but as it was only used for limited activities (repository of teaching material and assessment submissions) students did not associate it as a full virtual learning environment. Students found it challenging to substitute face-to-face teaching with the new forms of VDS, particularly for design learning where studio and making are the core components. Students commented on their expectations of initial switch to the VDS, 11 (58%) had a certain amount of anxiety about the switch to fully online teaching, with a particular focus on the perceived lack of ability to communicate with lecturers and other students in an online environment and concerns over efficiency compared to learning in a physical studio setting. One student raised particular concerns over connectivity and access. Others highlighted positives:

- Convenience
- Easy to use
- Less time to travel to campus

Students were asked to comment if their initial reactions to the VDS persisted or if after a period of use, their opinion of the VDS changed. Out of the 11 (58%) who reported anxiety at the beginning, just over half (6) still felt anxious and found using the VDS challenging. The reasons varied from inability to concentrate for the entire online session, difficulty showing the correct amount of detail in sketches, final presentation challenges, and a strong preference for face-to-face teaching and learning. The remaining students' feedback highlights that they see the increased flexibility, convenience and safety (timing and pace of learning;

when to learn) as a major benefit; for example, one student highlighted that the VDS flexibility is 'good for PT [part-time] students who have a FT [full-time] job'. Students especially appreciated the convenience of watching online videos, which allowed them to review learning materials repeatedly and learn at their own pace. Providing greatly flexibility of when and how to learn.

Virtual Design Studio Challenges: Isolation, Interaction and Lack of Communication

When comparing the VDS to the physical design studio student feedback highlight the challenges, particularly around isolation, lack of interaction and communication with fellow students. There is a growing body of literature which discusses the effects of online learning on mental health, and the need for resilience building and wellbeing as this is an implicit student need in virtual learning spaces (Lister et al., 2021; Johnson & Merrick, 2020; Schlesselman et al., 2020; Duggal & Bagasrawala, 2020). Feedback from the students indicated that increased isolation and lack of interaction have been challenging. Despite seeing lecturers and other students virtually throughout the day, the virtual design studio environment allows only limited, artificial interaction which can create a form of anxiety referred to as 'Zoom fatigue' (Sklar, 2020). Croft (2010) highlights the physical and temporal separation between lecturer and student, and between students themselves, can lead to feelings of isolation, which can have direct and indirect influence on their learning experience. This appears to be the case with the CIHE students. A potential implication for practice relates to the VDS environment, particularly this intersection between isolation, interaction and social belonging. Isolation was invariably seen as a barrier; one student describing that they had 'lost the intimacy relationship and communication with tutors and classmates'. Conversely, feeling part of a community of practice was an enabler to mental wellbeing, and from the feedback this is something that students feel an integral part of the physical design studio. For a VDS to succeed there is a need to create a form of online learning community, where peer contact is enabled and students are

encouraged to share their work and ideas. Introducing and maintaining a format for online discussions, for instance channel-based communications such as Discord and Slack are seen as a potential solution, to allow students to record, share and discuss experiences during and throughout their course (Vladoiu & Constantinescu, 2020; Mock, 2019). It has been suggested, however, that tutor facilitation would be required to generate these discussions and ensure that they were used on a regular basis.

Adapting Approaches in Architecture Education to Suit the Specific Requirements of VDS

When comparing the VDS to the physical design studio for specific elements of the curriculum, student feedback highlights a range of challenges and positives depending on the curriculum topic. When selecting a topic for their Major Project, the majority (95%) of students indicated that their experience of the VDS was the same or slightly better than the physical design studio. Students also felt that collating and sharing their own design research in the VDS was a positive one; 'sharing the digital research and media is a huge advantage on Zoom'. Specific challenges emerged with form and space planning, physical models and materiality. Students indicate that making models, detailing and texture comparisons were not possible in the VDS. Interior Architecture and Design is a time-space art based on physical 3D space. Physical 3D models are a vital media and tool in design studios to interpret, modify and represent spatial design in different stages, being deliberately used in studio discussions. CIHE students and staff had a profound challenge in VDS to simulate such discussions through a screen. In some instances, 3D modelling tools such as SketchUp were used and shared through Zoom, where both students and staff can interact (move and modify) with a model to support their discussions. Due to the lack of physicality the understanding of the design process through group discussions and feedback did not translate successfully compared to the physical design studio. This is something that comes naturally during face-to-face interactions but is less successful in a digital environment. The use of SketchUp provided an interim solution to facilitate dialogue and design development. A fully

online multi-user interactive tool for 3D models remains an area to further develop in VDS.

Learning through sketching is another key aspect that students highlighted as is challenging in the VDS. CHIE's collaborative partners, the Portsmouth School of Architecture (PSA), also identified sketching as problematic for staff and students particularly with regards to feeling limited when attempting to sketch over the digital drawings shared by students during virtual studio sessions. The VDS software that has been used at the University of Portsmouth (UoP) includes Webex and Zoom, both of which have annotation tools. These annotation functions rely on the use of a mouse, or simply moving a finger over a trackpad, to draw lines and symbols on screen. PSA staff worked together to submit a bid and subsequently obtained a small amount of funding from the UoP Faculty of Creative and Cultural Industries (CCI) to purchase, test and experiment with a variety of different tablets and styli (iPad + Apple Pencil, Samsung Tablet + Pen and a Huion Tablet + Pen) to find more tactile and fluid ways of sketching within the VDS. The results showed that PSA staff could engage with students' digital work quickly and more intuitively when using tablets and styli. After the test results were shared with senior staff in the Faculty, funding was provided to enable tablets and styli to be purchased for PSA colleagues to assist with their digital studio teaching practice. CHIE staff also experimented with tablets or drawing pads (iPad + Apple Pencil, Samsung Tablet + Pen) to make up for the lack of a physical sketch board. The shared tablet screen with certain drawing apps (e.g. Adobe Sketch, Bamboo Paper, Procreate and Concepts) on Zoom does enable the flow and flexibility of freehand sketches and diagramming process of design.

Key Learning Points

The ongoing and critical situation with the COVID-19 pandemic has led to an extended period where teaching and learning is delivered remotely. The unplanned conversion to online learning has been perceived as a temporary adjustment necessitated by the circumstance of the protests and then the pandemic; however, this enforced shift provides an

opportunity for radical transformation. Extraordinary times demand new approaches, creativity and democratic ways of reinventing architectural education for the future. What can we learn from this turbulent environment to inform how we might rethink and reimagine the delivery of architecture teaching and learning?

The Interior Architecture and Design students feedback suggests that the VDS was an effective approach where the online elements enhanced the student learning experience in that students had greater flexibility and control of the timing, pace and location of their learning and the convenience of less travel to the campus was required. Conversely significant challenges were raised particularly around specific curriculum elements and of most concern the isolation, lack of interaction and communication with fellow students. Given the likelihood that some form of online delivery will remain Post-COVID it is important to address this by creating an online learning community of practice, where peer contact is enabled and students are encouraged to share their work and ideas.

A concern with this desired future of VDS pertains to staff training and resistance to change in pedagogic practice that will likely be encountered post-COVID. Even throughout the pandemic, there have been many student comments from different institutes highlighting a need for the 'teaching' of teachers. A combination of staff experiences throughout the COVID-19 pandemic and more robust digital pedagogic training will be required to implement, manage and operate these suggested online learning communities of practice. Through the application of these new skills to emergent platforms, there will be an allowance for more intricate tailoring of VDS components into course structures and the accommodation for the heightened digital literacy of future student cohorts.

The enforced VDS is challenging the traditional view that architectural education is solely a face-to-face activity, forcing visibility on the potential for more flexible learning opportunities both at a distance and in blended contexts. Exploration into the impact of liberation from studio spaces on student learning, such as Abdullah et al. (2011), can be furthered through the flexibility provided by VDS.

Conclusion

Traditional views of architectural education as solely face-to-face learning are unlikely to remain as entrenched within pedagogical culture as they were before the COVID-19 pandemic. There is great potential for more flexible learning opportunities both at a distance and in blended contexts. It is important to enable further experimentation with VDS elements at different levels to explore more aspects of the ways in which the profession can be taught and improved upon. Without these future explorations, it will be hard to deliver a robust pedagogical approach that properly responds to student expectations and accommodates the heightened digital requirements of future cohorts.

References

- Abdullah, N., Beh, S., Tahir, M., Che Ani, A., & Tawil, N. (2011). Architecture design studio culture and learning spaces: A holistic approach to the design and planning of learning facilities. *Procedia—Social and Behavioural Sciences*, 15, 27–32. <https://doi.org/10.1016/j.sbspro.2011.03.044>
- Andrews, M. (2021a). *UoP and caritas: Ratio of architectural design and architectural lectures*. Internal Presentation, University of Portsmouth.
- Andrews, M. (2021b). *UoP and caritas: The 'messes' of architectural education*. Internal Presentation, University of Portsmouth.
- Browne, T., Jenkins, M., & Walker, R. (2006). A longitudinal perspective regarding the use of VLEs by higher education institutions in the United Kingdom. *Interactive Learning Environments*, 14(2), 177–192.
- Croft, N., Dalton, A., & Grant, M. (2010). Overcoming isolation in distance learning: Building a learning community through time and space. *Journal for Education in the Built Environment*, 5(1), 27–64. <https://doi.org/10.11120/jebe.2010.05010027>
- Duggal, C., & Bagasrawala, L. (2020). Promoting well-being and resilience of young people during COVID-19: An initiative with schools. In *COVID-19 pandemic: Challenges and responses of psychologists from India* (pp. 63–75). Leister Sam Sudheer Manickam.

- Farrelly, T., Raftery, D., & Harding, N. (2018). Exploring lecturer engagement with the VLE: Findings from a multi-college staff survey. *Irish Journal of Technology Enhanced Learning*, 3(2), 11–23.
- Hartley, J. (2004). Case study research. In C. Cassell & G. Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp. 323–333). Sage.
- Ismail, M., Mahmud, R., & Hassan, I. (2012). Digital studio vs. conventional in teaching architectural design process. *Procedia—Social and Behavioural Sciences*, 64, 18–25. <https://doi.org/10.1016/j.sbspro.2012.11.003>
- Johnson, C., & Merrick, B. (2020). Enabling music students' well-being through regular Zoom cohort chats during the COVID-19 crises. In *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 261–264). Association for the Advancement of Computing in Education (AACE).
- Jones, D., Lotz, N., & Holden, G. (2017). Lurking and learning: Making learning visible in a Virtual Design Studio. In G. Pritchard & N. Lambert (Eds.), *Proceedings of the LearnX Design London 2017 Conference*, London, pp. 176–183.
- Kvan, T. (2001). The pedagogy of virtual design studios. *Automation in Construction*, 10(3), 345–353.
- Lister, K., Seale, J., & Douce, C. (2021). Mental health in distance learning: A taxonomy of barriers and enablers to student mental wellbeing. *Open Learning: The Journal of Open, Distance and e-Learning*. <https://doi.org/10.1080/02680513.2021.1899907>
- Maher, M. L., Simoff, S. J., & Cicognani, A. (2000). *Understanding virtual design studios*. Springer Science and Business Media.
- Malins, J., Gray, C., Pirie, I., Cordiner, S., & Mckillop, C. (2003). The virtual design studio: Developing new tools for learning, practice and research in design. In *Proceedings of the 5th European academy of design conference*, pp. 1–7. <https://openair.rgu.ac.uk/handle/10059/622>.
- Mock, K. (2019, February). Experiences using discord as platform for online tutoring and building a CS community. In *SIGCSE'19: Proceedings of the 50th ACM Technical Symposium on Computer Science Education*, pp. 1284–1284.
- Pektaş, Ş. T. (2015). The virtual design studio on the cloud: A blended and distributed approach for technology-mediated design education. *Architectural Science Review*, 58(3), 255–265. <https://doi.org/10.1080/00038628.2015.1034085>

- Potts, W. (2000). The design studio as a vehicle for change: The 'Portsmouth Model'. In I. S. Pilling & D. Nicol (Eds.), *Changing architectural education towards a new professionalism* (pp. 241–251). Taylor & Francis Ltd.
- Rodriguez, C., Hudson, R., & Niblock, C. (2018). Collaborative learning in architectural education: Benefits of combining conventional studio, virtual design studio and live projects. *British Journal of Educational Technology*, 49(3), 337–353.
- Rogers, Y., & Marshall, P. (2017). Research in the wild. *Synthesis Lectures on Human-Centered Informatics*, 10(3), i–97.
- Royal Institute of British Architects. (2021). *RIBA procedures for validation and validation criteria for UK and international courses and examinations in architecture*. *Architecture.com*. Retrieved April 12, 2021, from <https://www.architecture.com/-/media/C51FE552841E45628A0F327593597FC5.pdf?la=en>
- Sara, R., & Parnell, R. (2020). Fear and learning in the architectural crit. *Field Journal*, 5(1), 101–125.
- Schlesselman, L. S., Cain, J., & DiVall, M. (2020). Improving and restoring the well-being and resilience of pharmacy students during a pandemic. *American Journal of Pharmaceutical Education*, 84(6), ajpe8144. <https://doi.org/10.5688/ajpe8144>
- Schnabel, M., & Ham, J. (2012). Virtual design studio within a blended social network. *Journal of Information Technology in Construction*, 17(Special Issue), 397–415.
- Schön, D. (1985). *The design studio: An exploration of its traditions and potentials*. RIBA Publications for RIBA Building Industry Trust.
- Selwyn, N. (2016). *Is technology good for education?* Wiley.
- Shelden, D., Bharwani, S., Mitchell, W., & Williams, J. (1995). Requirements for virtual design review. *Architectural Research Quarterly*, 1(2), 80–89. <https://doi.org/10.1017/S1359135500002785>
- Sklar J. (2020). 'Zoom Fatigue' is taxing the brain. Here's why that happens. National Geographic website. Retrieved April 24, 2021, from <https://www.nationalgeographic.com/science/2020/04/coronavirus-zoom-fatigue-is-taxing-the-brain-here-is-whythat-happens/>
- Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Sage.
- Torres Martín, C., Acal, C., El Honrani, M., & Mingorance Estrada, Á. C. (2021). Impact on the virtual learning environment due to COVID-19. *Sustainability*, 13(2), 582.

- Vladoiu, M., & Constantinescu, Z. (2020). Learning during COVID-19 pandemic: Online education community, based on discord. In *2020 19th RoEduNet conference: Networking in Education and Research (RoEduNet)*, pp. 1–6.
- Wojtowicz, J. (1995). *Virtual design studio* (Vol. 1). Hong Kong University Press.
- Wright, A., & Grover, R. (2020). Studio teaching falls victim to Covid. The RIBA Journal. <https://www.ribaj.com/intelligence/studio-teaching-coronavirus-student-satisfaction-survey>



35

Transforming Online Learning: From Distant Relative to Nearest and Dearest

Janet Cash

Introduction

The spread of the COVID-19 pandemic began to impact lives on a global scale in the first quarter of 2020 and continues to affect the approach taken in learning and teaching (L & T), including in higher education (HE) (Crawford & Cifuentes-Faura, 2022), drastically altering the way courses are delivered (Lassoued et al., 2020; Bao, 2020). As a result, much of the subsequent research is centred on ensuring future good practice in online learning, which became a reality for over one billion HE students during the first global lockdown in over 177 countries (Marinoni et al., 2020). These studies include recommendations and guidelines to support such pedagogical approaches (Lassoued et al., 2020; Hew et al., 2020; Izagirre-Olaizola & Morandeira-Arca, 2020) and more inclusive practice (Brooks et al., 2020), as well as the challenges faced (Shrestha et al., 2021), confirming predecessors' predictions of the advance of distance

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learning technology (Traxler, 2018) and predictors for success (Roddy et al., 2017).

This descriptive case study provides an evaluation of the approach to lockdown L & T in a level four Human Resources (HR) module, delivered at a UK higher education institution (HEI), using data from the results of a qualitative survey and responses to student interviews. Concepts related to the ‘community’ facet of Anderson’s (2004) Model of Online Learning and the ‘content’ element of Miller’s (2020) Inclusive Curriculum Model formed three linked themes: (i) community, (ii) content and (iii) facilitator, underpinning the research design. The spike in enrolments of International students in the 2019/2020 academic year promoted the addition of questions relating to perceived levels of inclusivity among International students and their Home/EU counterparts.

Contextual Background

The University of Wolverhampton

A polytechnic between 1969 and 1991, the University of Wolverhampton is now a place of learning for over 22,000 students and continues to welcome first-generation students from the local catchment area and beyond, as well as International students from across the globe. The number of International students rises year on year—the 2019/2020 academic year being no exception—and 2020/2021 enrolments cemented this as a growing trend.

University Policies and Practice

Since the university’s portfolio has, for some time, included a number of courses which can be studied solely online, the university has a set of principles relating to the delivery of online L & T, in addition to policies relating to inclusive curriculum. The university takes a partnership approach to curriculum development, with staff at all levels working alongside students and the Student Union to develop an institution-wide

approach to improving outcomes through modern, responsive, co-constructed courses and development programmes. Prior to the COVID-19 outbreak, the partnership created a dedicated area on the virtual learning environment (VLE), as well as social media accounts and events, to encourage staff and students to contribute to a more inclusive curriculum (University of Wolverhampton, 2021).

The Department

The Department of Management and Leadership (DoML) is one of three academic departments, which make up the University of Wolverhampton Business School (UWBS), delivering a range of undergraduate and post-graduate level modules and courses to students, internal staff and external companies—the latter two in the form of semi-tailored leadership programmes. The department offers professionally accredited courses in HR in partnership with the Chartered Institute of Personnel and Development (CIPD) at both undergraduate and postgraduate levels, for which the retention, progression and attainment rate is excellent, with a notably high number of students obtaining a ‘good’ degree classification.

Technology

The main programmes available to Business School academics in the delivery of online L & T are the Canvas VLE (which includes facilities such as Big Blue Button Conferences, Discussions, Announcements and the ability to use additional plug-ins such as YouTube) and the more recently introduced Microsoft Teams, both of which are used interchangeably by academics, depending on individual views on their ease of use. One of the issues with some such programmes, however, is their user-friendliness for students when accessing online materials using mobile devices, due to digital poverty (Office for Students, 2020).

The Module and Students

Diversity Management in a Global Context supports first-year undergraduate students to gain an understanding of the importance of equality, diversity and inclusion (EDI) to organisations across the globe. The module team facilitates discussions around sensitive issues such as discrimination, as well as more positive accounts of the celebration of diversity in many contexts. International students account for over 70% of the module enrolments, and this diversity contributes to the growing buzz of classroom discussions and group activities as the semester unfolds, allowing students to ‘live’ the module learning outcomes, providing practical, real-life immersion into the world of working with others from many different backgrounds.

The study population consists of two cohorts of students who studied the module during the UK lockdown period and for whom delivery of the module was either wholly or mostly online. The approach taken to the dissemination of survey and interview invitations to both staff and students and the results of subsequent analysis are discussed in the preceding sections.

Evaluation Procedure

Approach

The epistemological approach for this case study is most closely associated with social constructivism, the main aim to evaluate the module’s approach in terms of relationships between and among students and staff and the extent to which a sense of community is perceived to support learning and a sense of belonging. A comprehensive qualitative approach was taken in the evaluation of the module, involving the use of two relevant methods, which contributed to construct validity (Yin, 2009).

Methods

A combination of data collected in surveys and semi-structured interviews enabled stories of students’ first-hand experiences on the module to

be conveyed. However, to provide a robust structure for this approach, an appropriate model was required. Anderson's (2004) Model of Online Learning lists the significant interactions which course designers might consider in their development of online L & T, with an emphasis on student construction of knowledge, facilitated by teaching staff (Jaffer, 2010). The model supports course designers to consider the fundamental elements of online course design, including developing a 'community of inquiry' for students (Garrison et al., 2001) but, in order to mitigate any perceived shortcomings of this early 2000s model, the Inclusive Curriculum Model complements this, to provide a contemporary measure of approaches to the module content and how these might meet the needs of students (Miller, 2020).

All Cohort A (90 students) and Cohort B (54 students) were included in initial invitations to participate. It is worth noting that Cohort A and Cohort B students received 4 and 12 weeks of online teaching, respectively. Students and staff were contacted via email, and students received additional notification through the Announcements function on the VLE. The student and staff surveys administered were similar in structure and approach, with the exception of a small number of questions in the student survey, related to 'student-student' interaction and preliminary questions related to students' access to devices to support engagement with the module materials and sessions. The semi-structured interview questions were designed to invite rich, verbatim accounts of student experiences (Newby, 2010, p. 285), particularly in the areas of inclusivity, belonging and sense of community. All students' and academics' responses were confidential and anonymous, in line with the institution's ethical guidelines. Both surveys were administered online, with a direct link to the survey provided both in the Announcement and emails. Questions were grouped into the themes generated from Anderson (2004) and Miller's (2020) models—community, content and facilitator—with an additional, overarching theme of inclusivity throughout, which allowed for theoretical thematic analysis of the data (Braun & Clarke, 2006), which mitigated time constraints and enabled the rich accounts of participants to be categorised.

The interview schedule followed allowed students' stories to be heard in relation to belonging, community and inclusivity. Interviews were

held via Microsoft Teams video call, allowing the author to gain participants' accounts while also taking note of non-verbal cues. This combination of methods of evaluating students' experiences is viewed as both timely and informative in such rapidly changing times, contributing to future good practice through dissemination of strategies which support resilience during times of change (Ali et al., 2021).

Ethical Considerations

As both researcher and Module Leader for the focus of the evaluation, it was necessary to take a highly rigorous approach to the selection and administration of the research questions, as well as in the subsequent analysis of these. This approach included provision of information on the researcher's position in both the interview and survey information sheets distributed to participants. By overtly stating the relationship of the author to the subject of the evaluation, detrimental bias could be reduced, to allow the voices of the participants to provide the main substance of the evaluative data (Billups, 2021, pp. 24–25). Additionally, sample bias was avoided by holding interviews with students from both Cohorts and including International and Home/EU students (Newby, 2010, p. 290). Finally, reliability of data was supported by the transcription of interviews and anonymity of surveys, while the participation of Home, EU and International students in the study supported external validity by providing data which are generalisable to students in other HEIs (Drost, 2011).

Results

From the respective populations, a total of 23 students (14 from Cohort A and 9 from Cohort B) and 2 staff completed the surveys. Two Home/EU students and one International student participated in semi-structured interviews. Seven Cohort A respondents indicated that they were International students, an equal number stating that English is not their first language. In relation to country of residence during the lockdown period, all Cohort A students were living in the UK at the outset of the

lockdown and would therefore have received no more than four weeks of online teaching, learning and support. From the nine Cohort B respondents, six indicated that they were International students, again, an equal number stating that English is not their first language. In relation to country of residence during the lockdown period, all but one of the Cohort B students on the module were living in the UK at the outset of the lockdown.

To check students' access to the appropriate technology, preliminary questions asked student participants to select which devices they had access to. The majority of Cohort A and all of Cohort B had access to either a personal computer or a laptop during the lockdown. Only one Cohort B International student indicated that the only device available to them during lockdown was a mobile device.

Inclusivity: Staff and Student Perceptions

Unsurprisingly, given the topic of the module, students' understanding of the term 'inclusivity' was good and both staff and student perceptions of the term inclusivity were closely matched, with little to no variation between the parties when asked to select the option they thought best matched their understanding of 'inclusivity'.

Using Likert-style ratings for measuring how inclusive the online element of the module was during the lockdown (see Fig. 35.1), the majority of students selected favourable options, while staff perceptions of the module were split, with one selecting option 3 and one selecting option 5, one staff member commenting 'the Big Blue Button doesn't help that much as on Zoom we can see each other so I think helps to create a positive learning experience'.

Community

In the community-themed survey questions, student respondents selected a range of ways they communicate with other students, the top choices for both Cohorts identical. Collectively, students predominantly indicated the use of social media, VLE discussion pages and email to communicate with other students (see Fig. 35.2). Notably, the extent to

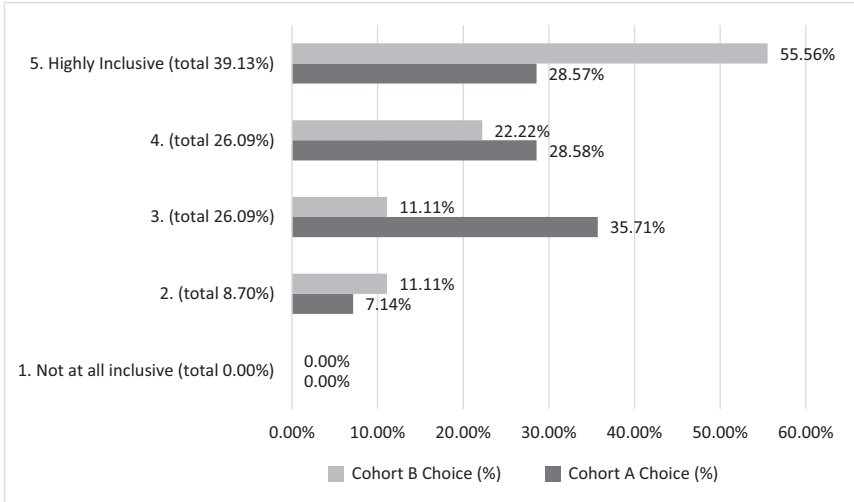


Fig. 35.1 Levels of perceived inclusivity

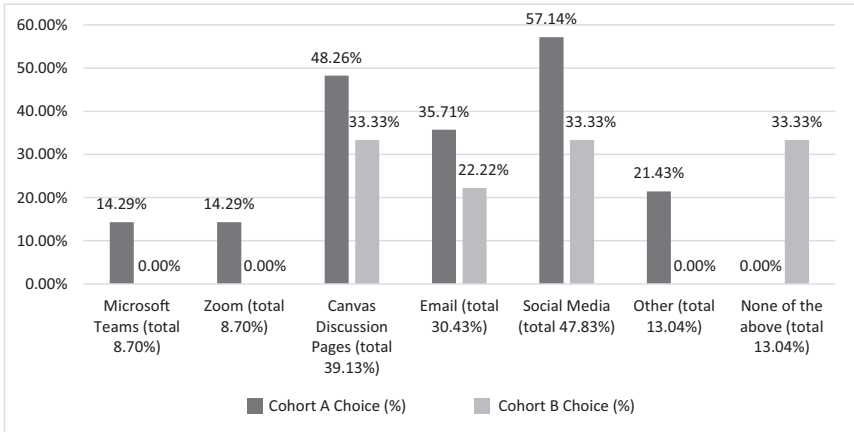


Fig. 35.2 Functions used to communicate with other students

which these forms of communication helped to increase students' complete sense of belonging was markedly different between Cohorts A and B, as well as when student respondents were split into Home/EU and International groupings, where responses from the International students were much more positive in terms of their sense of belonging.

The issue of social presence, a relevant subject raised by Thompson et al. (2013), is noted by both survey and interview participants, some having observed low levels of engagement in both synchronous and asynchronous online activities. One student wrote: ‘[MS] Teams group chats should become mandatory’, another stated ‘the discussion pages were often left blank and no one would write their opinion’ and the International student interviewee observed that ‘students within these modules [are] not really engaging with each other, so that’s why it just feels like everyone is separate’.

In relation to the importance of interacting with their community in developing self and others, Home/EU and International views differed on this during interviews, the International student suggesting ‘we may already know about our country, but different cultures, whenever we connect with different students, so it develops our knowledge of other cultures and traditions and so it [...] it creates a great community, diverse community’ and a Home/EU student stating:

you have to type in... these... comment boxes or whatever and nobody really actually does it because it feels, you don’t want to type anything in there which everybody can read and you might type rubbish and you feel, really, you know, it feels really awkward.

Content

Since the quality of VLE content has been found to contribute to higher levels of satisfaction (Rubin et al., 2013), both student and staff survey respondents were asked to rate the suitability of the VLE content using a five-point scale, with most students rating images positively. In relation to other media, such as video and audio recordings for asynchronous delivery, staff ratings were split equally between options 2 and 4.

The module reading list included six UK/EU authors, two international authors and six books and journal articles authored by a combination of the two, providing some diversity in reading materials. In terms of the perceived diversity of authors and sources used to support the module delivery, staff and students were asked to rate this—student ratings again

spanning options 3, 4 and 5, while staff ratings were divided between options 2 and 4. Given the importance of the language used to teach students (Miller, 2020), respondents’ views on the use of colloquialisms were sought, the most popular selection being ‘sometimes’. The majority of International students also recollected some use of colloquialisms.

While only eight students thought that regular opportunities were provided for students to share their experiences, both staff respondents thought that opportunities were provided sufficiently regularly. Student responses to the extent to which materials were learner-centred, though, favoured the more positive options (see Fig. 35.3), the most popular rating of four selected by over half of all student respondents. This mixed picture is mirrored in staff and student general comments on the theme of content for online teaching and learning, which highlighted both concerns and aspirations for future delivery. A Cohort A student wrote: ‘Because the University went online very late in the semester, everything was centred around face to face so there was not enough online content’; a staff member who taught both Cohorts of students shared their hopes for future online module content being ‘a place of peer support where they can hear each other’s challenge[s] and get solutions. The learning content to be slowed down, more interactive and engaging’.

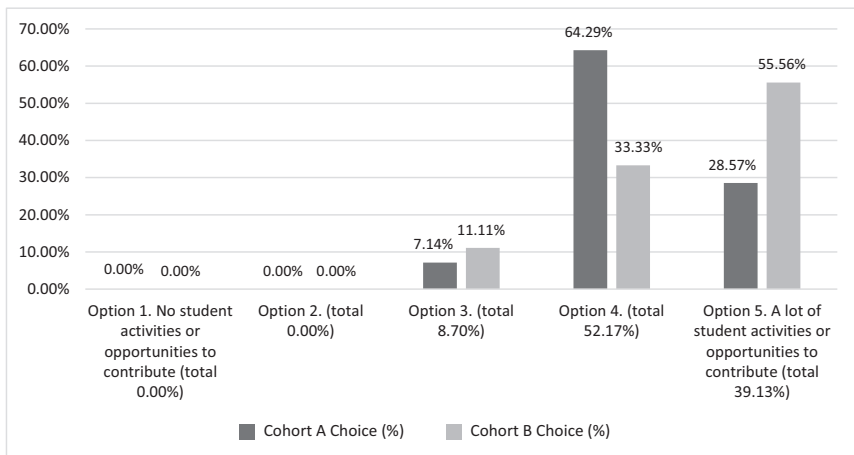


Fig. 35.3 Perceived learner-centredness of materials

Facilitator

In this section of the survey, students were invited to select all forms of contact used to communicate with the module tutor (see Fig. 35.4). Both Home and International students indicated regular use of email for contact with staff, many students from both Cohorts stating that this provided them with the greatest sense of belonging, although this preference was marginal amongst Home/EU students and overwhelming amongst International students. Only one of the staff respondents agreed that email would provide the best sense of belonging.

The remainder of Home/EU choices were all related to synchronous and asynchronous social interaction—video call, discussion page, group activities and online lessons—but none of the International student respondents chose these forms of contact as providing the greatest sense of belonging. One interviewee summed up their experience with teaching staff after the sudden transition to online L & T:

No, I mean that the teacher effort was enormous. So basically, every teacher from every group try to keep things up and keep things together... By also

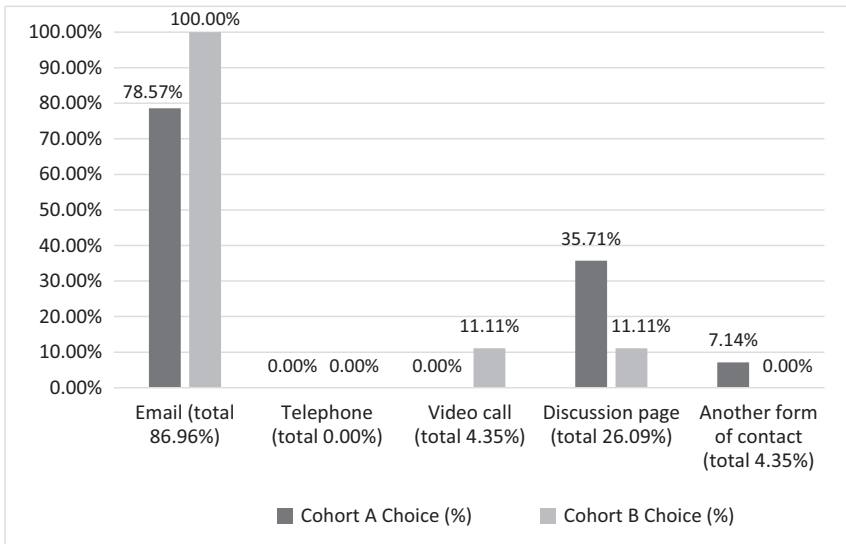


Fig. 35.4 Functions used to communicate with other students

attending and then also commenting on the student comments and that was the best that could have been done in this situation where nobody knew what is going on.

Discussion

As the data suggests, there were some notable variations between the Home/EU student responses and those of International students, both in survey and interview answers provided. The most striking contrasts, as well as commonalities between the two groups responses, raise a number of issues key module stakeholders might consider when further developing the online curriculum.

When questions related to ‘community’ were posed, some clear disparities appeared in the comparison between Home and International students’ preferred methods for communicating with each other—Home students most popular method being social media and International students being email. International students also felt this interaction increased their sense of belonging, either a little (30%) or completely (38%), significantly more than Home students, only one-fifth of these experiencing a sense of belonging from such contact. This distinction between levels of belonging experienced by the two groups may possibly be explained by the places of domicile during lockdown—Home/EU students not feeling as detached from existing contacts as International students, who had less opportunity to return to their home countries when the lockdown was implemented and, therefore, found some sense of belonging in their contact with both staff and students from the online module. Having said this, the divergence between survey responses and more in-depth opportunities to convey experiences, noted by Arkoudis et al. (2019) suggests a potentially different outcome to the positive experience survey respondents reported had they been given the opportunity to discuss their sense of belonging in more detail.

The importance of students working together to form communities cannot be understated. ‘Community-centredness’ highlights the key role such interactions play in enabling students to both support one another and, equally, challenge themselves and their peers (Anderson, 2004,

p. 51). The International interviewee had the most positive comment on this, in stark contrast to a Home/EU interviewee's perspective on the issue of student reluctance to connect with others in live online sessions. What is striking about this admission is that the Home/EU student is a confident and articulate mature student with grades to match, which raises questions about the level of confidence among less fluent and confident students, when faced with the 'chat box' foisted upon students during live online sessions.

For reasons of conciseness, questions around confidence levels were not included in this evaluation, nor was there any investigation into pre-COVID on-campus L & T activities. Despite this, both survey and interview participants highlighted the absence of direct social contact and, although online tutorials, video and telephone calls were offered, this appears to have been a poor substitute for in-person teaching, a Home/EU interviewee stating, 'we're not having the social... the social part of things'. This comment, amongst others, emphasises the pressing need to devise ways to further encourage and support interaction between students and with staff in an online context, where this is the only available option for institutions.

The theme of 'content' fared better in this evaluation from an International student perspective, as, although almost two-thirds of the whole student sample considered the module to have an inclusive or very inclusive approach, this figure translates to 50% and 76% for Home and International students, respectively. Home students rated the inclusivity of online content slightly lower than their International counterparts, but not markedly and, while universally positive student experiences are both desirable and valuable to the institution, the question of whether International students perceived the module as inclusive is an important one, given the link between positive experiences and retention amongst this group (García et al., 2019).

In relation to the theme of 'facilitator' when the equal availability of the newer MS Teams chat as an instant messaging option is considered, the high number of respondents indicating their clear preference for the use of email as a form of communication highlights the precedence students' familiarity with this existing mode of contact has over a more novel approach to communicating with module staff. The importance of being

able to contact staff is not overlooked by the regulator, the Office for Students' (2020) review into digital poverty incorporating students' abilities to communicate with staff in their research during the lockdown. It may well be that, despite having laptops and PCs, some students were predominantly using mobile devices and that any addition of yet more 'apps'—such as MS Teams—to their already overloaded devices may have been impractical. What is encouraging about students' use of email to communicate with staff is that two-thirds of respondents stated this created the greatest sense of belonging for them. One of the key learning points from this discovery is that, for students studying solely online, 'new'—in the form of MS Teams—does not always equate to 'best' or even 'better' when compared to the well-established email.

Typical responses to the question of what made students feel most included and valued in this online module highlighted the value of encouraging students to share their experiences with others (Miller, 2020), such as the response from one Home/EU student—'feedback of teacher on discussion tab' and an International student 'communication with other students enhance[d] my knowledge'.

From the mixed responses, some long-term implications arise, providing valuable lessons which might support the development of the University's approach to online L & T of the Home, EU and International student population, outlined further below. Some of these recommendations are of a transferable nature, suitable for use in other institutions which cater to diverse groups of students, as well as those wishing to provide a more inclusive approach to their curricula.

Long-term Implications

The key learning points which emerged include current benefits and future challenges for the implementation of online courses and programmes which might further improve students' feelings of belonging and contribute to an increased sense of community amongst diverse student populations.

1. *Community*—Many students can and will find ways to communicate with each other in adverse circumstances, sticking to traditional methods, as well as using more informal ways of communicating, such as social media. The challenge for institutions is in transferring these informal communities to a VLE, while maintaining the students' sense of ownership and progressively encouraging the inclusion of module/programme-related dialogue.
2. *Content*—As the closest equivalent to on-campus teaching, interactive synchronous sessions are an essential ingredient of successful online module delivery. In order to make these successful, the number of students in attendance at each session needs to be monitored and, wherever possible, limited, to avoid student reluctance to contribute to larger groups. This may have resource implications for institutions.
3. *Facilitator*—Student-teacher contact can be maintained in the complete absence of face-to-face, on-campus L & T, which could be considered a lifeline to isolated individuals, such as International students. The challenge for staff is encouraging more diversity in forms of student-teacher communication, such as Discussion pages, which can also contribute to the learning and development of the wider group, when linked to specific activities.

These learning points are applicable both to the current COVID semi-lockdown L & T approach and the post-COVID return to some semblance of normality. However, in the utopian, COVID-free world of higher education, the growth of online courses such as UMOOCs and the like (Traxler, 2018) make the approaches recommended here both relevant and valuable.

Conclusion

This study provides an insight into student perceptions of enforced online learning in HE during the UK's COVID-19 lockdown and provides an interesting comparison between those of Home/EU and International students studying the same module. While the study is confined to business-specific subjects, the similarity in delivery styles between this

and a great proportion of other social sciences subjects, both in the UK and across the globe, suggests the good practice and learning points identified in this evaluation are not only relevant to other such subjects but may, additionally, provide a number of key points for consideration in the future development of increased inclusivity of approach within and beyond social sciences teaching in HE. Nonetheless, the value of any future approaches to improving inclusivity in online learning environments should be subject to robust evaluation which incorporates and considers the perceptions of all key course stakeholders, in order to comprehensively assess local results within institutions. For themes and models which complement this research, the areas most pertinent to this evaluation and potential future studies of this type include online student expectations and experiences, the International student lifecycle, inclusion in pedagogical approaches and communities of inquiry.

References

- Ali, A., Crawford, J., Cejnar, L., Harman, K., & Sim, K. (2021). What student evaluations are not: Scholarship of teaching and learning using student evaluations. *Journal of University Teaching & Learning Practice*, 18(8), 1–12. <https://doi.org/10.53761/1.18.8.1>
- Anderson, T. (2004). *The theory and practice of online learning* (2nd ed.). AU Press.
- Arkoudis, M., Baik, C., & Patience, A. (2019). International students' experience in Australian higher education: Can we do better? *Higher Education*, 77, 799–813. <https://doi.org/10.1007/s10734-018-0302-x>
- Bao, W. (2020). Covid-19 and online teaching in higher education: A case study of Peking University. *Human Behaviour and Emerging Technologies*, 2, 113–115. <https://doi.org/10.1002/hbe2.191>
- Billups, F. D. (2021). *Qualitative data collection tools design, development and applications*. Sage Publications Limited.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brooks, C., Kizilcec, R. F., & Dowell, N. (2020). *Designing inclusive learning environments*. Proceedings of the L@S '20 August 2020, Virtual Event. <https://doi.org/10.1145/3386527.3405935>

- Crawford, J., & Cifuentes-Faura, J. (2022). Sustainability in higher education during the Covid-19 pandemic: A systematic review. *Sustainability*, 14(3), 1879. <https://doi.org/10.3390/su14031879>
- Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and Perspectives*, 38(1), 105–124.
- García, H. A., Garza, T., & Yeaton-Hromada, K. (2019). Do we belong? A conceptual model for international students' sense of belonging in community colleges. *Journal of International Students*, 9(2), 460–487. <https://doi.org/10.32674/jis.v9i2.669>
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23. <https://doi.org/10.1080/08923640109527071>
- Hew, K. F., Jia, C., Gonda, D. E., & Bai, S. (2020). Transitioning to the “new normal” of learning in unpredictable times: Pedagogical practices and learning performance in fully online flipped classrooms. *International Journal of Educational Technology in Higher Education*, 17(57), 1–22. <https://doi.org/10.1186/s41239-020-00234-x>
- Izagirre-Olaizola, J., & Morandeira-Arca, J. (2020). Business management teaching-learning processes in times of pandemic: Flipped classroom at a distance. *Sustainability*, 12, 1–17. <https://doi.org/10.3390/su122310137>
- Jaffer, S. (2010). Educational technology pedagogy: A looseness of fit between learning theories and pedagogy. *Education as Change*, 14(2), 273–287. <https://doi.org/10.1080/16823206.2010.522066>
- Lassoued, Z., Alhendawi, M., & Bashitialshaaer, R. (2020). An exploratory study of the obstacles for achieving quality in distance learning during the Covid-19 pandemic. *Education Sciences*, 10(232), 1–13. <https://doi.org/10.3390/educi10090232>
- Marinoni, G., van't Land, H., & Jensen, T. (2020). *The impact of Covid-19 on higher education around the world*. International Association of Universities.
- Miller, P. (2020). *Inclusivising the curriculum: Towards a model of inclusivity—conceptual and practical issues*. Educational Equity Services.
- Newby, P. (2010). *Research methods for education*. Pearson Education Limited.
- Office for Students. (2020). <https://www.officeforstudents.org.uk/news-blog-and-events/press-and-media/digital-poverty-risks-leaving-students-behind/>
- Roddy, C., Lalaine Amiet, D., Chung, J., Holt, C., Shaw, L., McKenzie, S., et al. (2017). Applying best practice online learning, teaching and support to intensive online environments: An integrative review. *Frontiers in Education*, 2(59), 1–10. <https://doi.org/10.3389/educ.2017.00059>

- Rubin, B., Fernandes, R., & Avgerinou, M. D. (2013). The effects of technology on the community of inquiry and satisfaction with online courses. *Internet and Higher Education*, 17, 48–57. <https://doi.org/10.1016/j.iheduc.2012.09.006>
- Shrestha, S., Haque, S., Dawadi, S., & Ashish, G. (2021). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and Information Technologies*, 27, 243–265. <https://doi.org/10.1007/s10639-021-10659-0>
- Thompson, N. L., Miller, N. C., & Pomykal Franz, D. (2013). Comparing online and face-to-face learning experiences for nontraditional students: A case study of three online teacher education candidates. *The Quarterly Review of Distance Education*, 14(4), 233–251.
- Traxler, J. (2018). Distance learning—predictions and possibilities. *Education Sciences*, 8(1), 1–13. <https://doi.org/10.3390/educsci8010035>
- University of Wolverhampton. (2021). *Include me [Canvas]*. University of Wolverhampton.
- Yin, R. K. (2009). *Case study research design and methods* (4th ed.). Sage.

Part IV

Restructuring Assessment and Feedback for Online Pedagogies



36

Enhancing Online Assessment Quality through Collaboration

Sonia Saluja and Helen Keen-Dyer

Introduction

For the Medical Science team at CQUniversity Australia, COVID-19 necessitated the development of online assessments for anatomy, physiology and pathophysiology units. This presented a range of challenges as staff were required to swiftly change their assessment instruments. The collaborative approach that was taken, known here as the quality assurance review process, supported Medical Sciences team members to achieve the task at hand (the development of fit for purpose, quality online alternative assessment instruments). Using the social learning theory (SLT) value creation framework (VCF), three themes emerged as central to understanding the quality assurance review process and its achievements. Firstly, the Medical Sciences quality assurance review

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process was underpinned by a structural framework, from which it emerged contained three elements, that is, timelines, focus areas and roles. This framework was sufficiently organised to provide guidance, support and direction about what was expected and by when, whilst being flexible enough to be responsive to the changing COVID-19 environment. Secondly, activity was driven by and in pursuit of a joint mission, which united the team and their efforts. Thirdly, at regular intervals, the team collected and reflected on information related to the process, and the experiences of being involved, and this information served as a point of reflection and the basis of discussions; lessons learnt as the basis for changing or refining of practice. Collectively, these three themes provide insights into an approach which from the Medical Sciences experience has the potential to guide individuals and groups to be agile and at the same time supported in their response to disruptive events.

Medical Sciences Online Assessments at CQUniversity Australia

CQUniversity Australia is Australia's largest regional university offering hundreds of education and training options from short courses, certificates and diplomas to undergraduate, postgraduate and research higher degrees (CQUniversity Australia [CQU], 2020b). The university has the largest geographical footprint of any Australian university with a campus presence in every mainland state of Australia and operates in more than 20 locations throughout many of Australia's major cities and regional centres (CQUniversity Australia [CQU], 2019). The university's eight schools offer a multitude of courses, with each course or cognate group of courses led by a Head of Course (HoC). The Medical Sciences area is part of the School of Health, Medical and Applied Sciences.

The academic staff of the Medical Science team are an experienced team who have vast national and international experience. Experience ranges from medical researchers, medical laboratory scientists and medical doctors. The Medical Science team teach foundational subjects in anatomy, physiology and pathophysiology, which are common to

multiple health professional courses and are taught in both the on-campus and online education mode.

Typically, the foundational subjects taught by the Medical Sciences team include an end of term examination which is held on-campus, is invigilated and is a closed book type of examination. At CQUniversity, the invigilated examination type has an inbuilt quality assurance process that involves multiple steps, with multiple checks and balances (Assessment Policy and Procedure, 2020). With COVID-19 necessitating the rapid transition of teaching to the fully online mode, the team were responsible for developing alternative online assessments to replace invigilated on-campus examinations. The development and quality assurance of the alternative assessments was the responsibility of the individual academic assigned to the subject (unit of study), which as has been reported elsewhere (see Guppy et al., 2022) and forced staff into new or less familiar territory and without sufficient time for necessary professional development and adequate preparation.

To support and sustain a focus on quality assurance and good practice in the development of the alternative online assessments, the Medical Science HoC advocated for a collaborative team-based approach, which drew on the teams existing buddy system. As part of the buddy system, team members nominated themselves for subjects where they held expertise. Prior to COVID-19 the role of the buddy was to support their fellow team member in the delivery of the subject, such as in tutorial delivery or marking.

In the COVID-19 context, each foundational subject in the Medical Sciences portfolio had the support of the nominated buddy (who had subject expertise) and the HoC. Additional support, such as technology support, was sourced as required. This approach of provision of support is consistent with the findings of Pownell et al. (2022) who reported that to meaningfully and successfully implement recommendations for educators in higher education during COVID-19, institutional or managerial support was required. The buddy and the HoC served as both a critical friend and reviewer for the quality assurance review process. In doing so, the academic staff member could focus on developing the alternative online assessment instruments, and the reviewers focus on ensuring the quality of the product being delivered to the students.

Evaluation Framework

The evaluation presented here aimed to explore and document the approach taken by the CQUniversity Medical Sciences team as it responded to the rapidly changing COVID-19 environment (and the need to swiftly deal with changes to assessment practice) and what that might tell us about collaborative approaches and associated processes. For the purposes of this book chapter, the evaluation was guided by the question of: what are the key characteristics and processes of the CQUniversity Medical Sciences quality assurance approach.

From a conceptual perspective, the evaluation used the social learning theory (SLT) value creation framework (VCF). SLT focusses on the learning that occurs within and through a social learning system (Wenger, 2000). The different actions and interactions within the system contribute (either positively or otherwise) to the learning process and as a result of that learning process, the practices of the system and the individuals within that system are shaped. The VCF consists of a structure of different value types, for example, potential value and realised value, which make up a set of theoretical constructs for documenting, as well as analysing and communicating the resultant effect of action and interaction within a system (Wenger et al., 2011; Wenger-Trayner & Wenger-Trayner, 2020). Using the broad and somewhat similar example of a group who are joined together in the shared, but largely unfamiliar task of develop online assessment instruments, Table 36.1 provides an overview of the VCF value types. It is through the VCF we can gain insights into what supports (or otherwise) learning within a system (Wenger-Trayner et al., 2017).

Approvals to conduct the evaluation were gained from the CQUniversity Australia Human Research Ethics Committee (approval no. 0000022855). The evaluation used existing data, in the form of organisational records and document artefacts. The records and artefacts in question were created by the Medical Sciences team and individuals within the team and as part of the ethics process, each team member gave permission for any documents or contributions to documents to be used as part of the evaluation. The corpus of data included items such as tables containing

Table 36.1 Value creation framework value types

Value type	Overview
Immediate value	Related to an experience(s), and the value of the activities and interactions of that experience(s), e.g. value derived from group meeting discussing the development of online assessments
Potential value	That produced from an experience(s), e.g. document created during the meeting outlining the steps and pitfalls of creating online assessments
Applied value	That applied or put into practice, e.g. applying the steps and avoiding the pitfalls discussed and documented at the group meeting
Realised value	The difference resulting from that applied or put into practice, e.g. deployed quality assessment instruments
Transformative value	The changes to practice or ways of practising, particularly those that are integrated broadly within and beyond the group, e.g. a new approach to online assessment development

Adapted from Wenger-Trayner et al. (2017)

assessment instrument detail, various team meeting records and a compilation document containing the various emails sent amongst team members as they navigated the development, implementation and review of the online assessment instruments. As such, these data sources provided researchers with a record of activity, and importantly, reflections on activity as the quality assurance review process unfolded in real-time. Twenty document artefacts were collected and assigned a data artefact number (DA). The data were analysed using Saldána's (2016) approach to qualitative data analysis, with each data artefact coded in a preliminary analytic process of constant comparison. Codes were then clustered into meaning-rich categories. These provided the basis for the thematic level of analysis, which delivered a conceptual and analytical reading of the data (Saldána, 2016). From a process perspective, that analytic reading was tuned into and out of (i) repetition, (ii) similarities and differences, (iii) silences and (iv) representations of the self and others (Bernard & Ryan, 2010). Guiding the conceptual reading was the VCF theoretical framework. As such, the VCF provided a frame through which to view the evaluation, the data, the resulting thematic analysis and findings.

Findings

The findings are presented through three themes, which emerged from the data analysis process outlined earlier. The themes include (i) organising and organisation, (ii) joint mission and (iii) learning lessons-lessons learnt. Individually, each theme provides insight into a particular aspect of the review process, for example, of a joint mission serving to drive efforts, of an emergent structural framework and of learning lessons and the use of these lessons in practice. Importantly, an interrelationship between the themes emerged. After discussing each theme, this book chapter moves to a discussion of the findings, which reads across the themes. Collectively, the themes speak of COVID-19 as providing a catalyst for an initiative, the Medical Sciences quality assurance review process, which supported the quality of the COVID-necessitated online assessment instruments and a transformative effect which has and continues to change the practices of Medical Sciences team members. To support the discussion, extracts from the data along with their assigned data artefact (DA) number are included in single inverted commas. The extracts ground the discussion and give a direct voice to the data.

Theme One: Organising and Organisation

Emerging from the data was a clear sense of organising and organisation. The architecture of the quality assurance review process and the elements within that architecture guided efforts; it served as an organising framework. Key to this architecture was the emergent structural framework of (i) timelines, (ii) focus areas and (iii) roles. Each of these worked together to support the efforts of team members. In terms of the timelines, the team agreed on dates for the different steps of the assessment development and review process. The timelines, which aligned with key semester dates, included dates for the (a) development of online assessment instruments, (b) review of draft instruments, (c) provision of feedback and (d) review of information collected about the experience and implementation of the instruments (DA6).

Next was the key focus areas. The focus areas supported consistency in the peer-review process and afforded a means by which to highlight areas felt important to the provision of quality assessment instruments. Each assessment instrument was reviewed for (a) alignment to learning outcomes, (b) promotion of academic integrity and (c) student experience. Within the structured purview of the focus areas, academics asked questions of the assessment instruments being reviewed. For example, when assessing the alignment to learning outcomes, a range of questions, such as 'are key learning outcomes from each week incorporated into the assessment' (DA15) or 'are the quiz questions designed to challenge the students at their appropriate year level of study' (DA11) guided academics reviewing draft assessment instruments.

In terms of academic integrity, academics were encouraged to develop assessments which required application of theory in addition to recall of information. It was felt that, 'developing application type of questions would provide a challenge and were not easily 'googled'' (DA15). In the assessment development phase, and knowing that academic integrity was a key focus area for the review process, academics were pushed to 'think outside the box' and design questions that assessed students conceptual understanding rather than memorisation of information. Academics acknowledged that 'sometimes it is easier to get stuck in a rut and just to do what has been done before and not challenge the process' (DA15) but the quality assurance review process prompted them to ask 'how can I do this differently now that it is online' (DA15).

Maintaining a positive student experience also emerged as important. Each assessment was reviewed via the Moodle learning management system as a student facing experience. After doing so, it was agreed that in order to decrease cognitive overload, only one question per page would be visible to the students, and wherever possible, it be in a simplified, easy-to-read format. As a result, the quality assurance review process gave the Medical Sciences team (and their students) a way to 'standardise the approach to the layout of the assessment items from unit to unit' (DA15).

The final element of the structural framework related to the roles played by team members. Each subject coordinator had the responsibility of developing an online assessment instrument and acting as buddy and reviewer for a fellow team member. As such, each academic was

supported by at least two team members; the HoC and buddy. It was felt that the roles gave subject coordinators 'greater confidence in the quality of assessments being developed and gave them the backing knowing that their assessments were not developed on a whim but can be defensible' (DA11). And conversely, in their role as a reviewer, 'reviewing assessments of team members gave them the opportunity to see what was done in other subjects and how it could be useful for them' (DA11).

Theme Two: Joint Mission

Developing quality alternative online assessment instruments for the COVID-19 impacted environment was 'challenging' (DA20), and there was simply 'so much to do in so little time' (DA10). As the enormity of the task at hand became apparent, the team looked ahead and to a means that would support their respective efforts. What emerged from the data was a strong sense that the 'driver of the process was to replace face-to-face invigilated exams with a quality online assessment experience' (DA7) and, importantly, that the team were united in that shared goal; they were all part of a joint mission.

Specific mechanisms cultivated and supported the joint mission. For example, weekly team meetings became active and collaborative spaces where team members had 'an opportunity to have open discussions around the assessment instrument, and to question the assessment with colleagues' (DA11). Because team members were 'looking for ways to improve the assessment as it had transitioned online, everyone was more inclined to engage in the process and provide suggestions based on what they were doing in their subject's' (DA15). As the weekly team meeting progressed, it became evident that the assessment-related issues and ideas being discussed could be used to support the future.

Interestingly, the data shows that the scope of the joint mission expanded from the initial focus of developing quality alternative online assessment instruments to replace the COVID-impacted invigilated examinations in a COVID-impacted term. The exercise became a 'learning opportunity for staff' (DA6) and an 'opportunity to set up future terms' (DA14). As such, the joint mission broadened to include

developing capabilities for the future; Higher Education assessment capabilities and resources that could be deployed beyond the COVID-impacted terms and into the future. It was noted that although this involved a 'significant amount of initial work, it will serve as a basis for future assessment tasks, the 'bones' are there' (DA6). In this way, the future and not just the COVID-19 environment was positively impacted by the quality assurance review process.

Theme Three: Learning Lessons-Lessons Learnt

As a result of the challenging pandemic environment, Medical Sciences team members were required to operate 'on the fly' (DA13) and were faced with a 'steep learning curve' (DA16). The third and final theme speaks to the learning of lessons and of the lessons learnt against that challenging backdrop; the 'how are we going to do things differently' (DA6). The theme captures what was learnt, the mechanisms that both supported and constrained the learning process, the body of lessons learnt plus how those lessons informed, and continue to do so, the practice of those within the team.

Firstly, the learning of lessons emerged at different levels, in particular, individual lessons, group lessons and an interplay between these. At an individual level, the review process enabled academics the opportunity to 'see what others do in their units that may be useful for me, e.g., different types of ways that we can ask question' (DA11), 'ideas for improving my resources' (DA11) and 'explore assessment tools that I would possibly not have considered' (DA11). Individuals spoke of acquiring new knowledge and skills, such as in 'constructing different question types' (DA15) or in the 'use of different electronic question options' (DA3). As a result, 'greater confidence, for example, in the quality of my assessment instruments' (DA12) was reported. Here we see the review process as exposing academics to new and different practices and approaches. Importantly, the data showed a plethora of examples of individuals enacting that learnt from others and realising enhancements to practice. From seeing what others do, 'I have been able to change some of my assessments and

improve the student experience' (DA15) or, similarly, 'it has allowed me to scaffold my units' (DA11).

At the group level, 'it was teamwork all the way' (DA12) or as was similarly reported 'teamwork was king' (DA14) and this extended to the learning and sharing of lessons. A collaborative and team-centric ethos emerged as central to the group and the review process, 'supporting staff learning, sharing approaches and practices' (DA1) was key. To guide efforts, information was collected via a series of documents, set up to collect like information across the different subjects served as a catalyst for reflecting on 'what was done, what worked and what didn't work, and to reflect on what others did' (DA10). Again, clearly emerging in the data are a range of examples of changes to practice resulting from the learning of lessons and the sharing of those lessons (here, supported by the document artefacts) within the team. For example, 'the use of perusal time and a consistent approach to perusal time' (DA10), 'the change to the number of assessments in some units' (DA10), 'adjustments to the time allocated to different quiz types' (DA10) all resulted from the team's consideration of the information collected on the practices and lessons learnt by individual team members.

Sustaining the learning of lessons within what presented as a difficult and pressure-driven environment was not without issue. 'Pressure was an issue ... with so much to do in so little time' (DA10), 'we (as in staff) didn't have time to prepare either' (DA6). In the response phase, issues arose, for example, 'the plan was for it to be mostly automatically marked by Moodle, but there were issues so ended up remarking all assessments' (DA1), 'a lack of suitable resources available at short notice' (DA3) or 'technical issues in creating online assessment instruments' (DA6). Interestingly, overcoming the challenges and sharing the strategies to address emergent issues served to drive and sustain the efforts of team members. 'Because we were looking for ways to improve the assessment as it had gone online, we were all the more inclined to engage in the review process' (DA15).

Drawing the Threads Together and Impacts Moving Forward

SLT has a focus on learning through participation in social practices and it is argued, has the capacity to support the response to complex learning challenges (Wenger-Trayner et al., 2017). Implementing alternative assessment instruments in a time-pressured environment and against the backdrop of a pandemic is argued here to fit the complex learning challenge threshold. Despite the challenging circumstances, positive results were achieved through the Medical Sciences quality assurance review process, and aspects of these have been carried forward; new practices have been incorporated into the repertoire of individual academics and team as a whole and standards of practice have become standard operating procedure for the Medical Sciences team. This is consistent with Guppy et al. (2022) who report CoVID-19 as a potential catalyst for change and for opening up new opportunities and ways of working.

The quality assurance review process and the enactment of that process resulted in value being created and that value served to support the efforts of academics. Value, in the context of social learning theory is conceptualised as related to usefulness or utility, rather than moral standard (Wenger-Trayner et al., 2017). The emergent value related to different levels within the social learning system, that is, value at the level of an individual academic and tied to their individual actions within the review process and that of the team as a whole and the team-level processes. A range of examples from the data have been plotted against the VCF value types (see Table 36.2). These and the plethora of other examples within the data point to there being value in collective and collaborative efforts and there being key elements underpinning a process of this kind.

It was clear from the evaluation that the structural framework was central to the success of the quality assurance review process. The three elements of the structural framework, that is, (i) timeline, (ii) focus areas and (iii) roles provided orientating information, a degree of consistency for the 'when', 'what' and 'who', and sufficient detail in order to cut through the noise of the chaotic pandemic environment. Each element had bounds and sufficient definition to support understanding (Wenger

Table 36.2 Value types and examples from the data

Value type	Examples from the data
Immediate value	Value emerged, for example, from 'open discussions around the assessment task, and to question the assessment task with colleagues' (DA11); 'support from others and willingness to help' (DA11); 'Working together as a team to figure out how to tackle assessment items' (DA11)
Potential value	Derived, for example, from document artefacts, such as 'feedback table 1: developing online assessments' (DA1); 'team meeting note' (DA6); assessment resources, such as the new 'Medical Sciences image bank of high quality anatomical models' (DA2); 'online quiz question banks' (DA3) 'guidelines and tip sheets developed to guide students in new assessments' (DA6)
Applied value	'Errors in spelling, grammar and content eliminated before assessments released to students' (DA3); 'issues in format and online user experience corrected' (DA3); 'Use of new resources (photographs) in teaching sessions and online quizzes' (DA6)
Realised value	Efficiencies, such as 'time and effort by having and using new question bank' (DA6); consistency of practice across the Medical Sciences group, such as, in 'standardized quiz times' (DA10); 'increased the number of distractors in online quiz' (DA10); 'based on reviewing the assessments of others, assessments now scaffolded from one year to the next' (DA3)
Transformative value	Group-level changes to practice, such as 'consistent use of distractors in online quizzes, in particular, the number of distractors' (DA10); 'change in the number of assessments in some units' (DA10); 'Assessment instruments that are now consistent in approach and consistently meet defined quality indicators' (DA3)

et al., 2002). A better student experience is closely associated with higher quality standards (Blackmore, 2005) and the structural framework was key to achieving the desired standard. The guiding principles of the UK Quality Code for Higher Education indicate that the focus areas followed by the Medical Science team support assessment quality (The Quality Assurance Agency for Higher Education [QAA], 2018). Importantly, there was also a degree of flexibility. As such the practices and approaches used to achieve the required tasks were flexible and could be tailored by individual academics. The structural framework employed for the

COVID-impacted environment will continue into the future and given the interest within CQUniversity Australia, is expected to expand to other discipline teams.

The quality assurance review process drew the Medical Sciences team together in a collective and collaborate effort. There was certainly a degree of what Bartolic et al. (2021) reported as individuals going it alone, especially in the early days but the 'go it alone' diminished over time. The review process served as a focal point for what emerged as a joint mission. Having a joint mission (of implementing quality alternative assessment instruments) and a shared commitment to that mission supports the activity of a social learning system (Wenger, 1998). This served to support individuals through the good, the bad and everything in-between. While the notion of a joint mission may be less acutely prominent in the 'next normal' business as usual phase, shared endeavour in a more subtle form will continue to guide the Medical Sciences team and if needs be, can be re-energised for future disruptive events.

The learning loops, and taking what is learnt in and through practice, supported the immediate response phase, and the outcomes of that process will endure beyond the COVID-impacted environment. The processes used to support that learning will also endure. From a social learning theory perspective, at its simplest, individuals engaged in practice (the development of online assessment instruments) and that practice provided insights (procedures, steps, pitfalls), which are potential lessons or learning opportunities for the individual and those within the group (Wenger, 1998; Wenger-Trayner & Wenger-Trayner, 2020). Reflection-in-action and reflection-on-action (Thompson & Pascal, 2012), and for that reflection to be focussed (on a joint mission) and scaffolded (by a structure) were key to the quality assurance review process and its outcomes.

Conclusion

The collaborative approach taken by the Medical Science team at CQUniversity Australia to enhance online assessment quality was catalysed by the global pandemic. While the structural framework provided

the consistency and a means to begin the journey, it allowed for opportunities to create an environment where ‘looking back to look forward’ was cultivated and encouraged. The specific support of a buddy and the broader support of a team emphasised the value of collaboration in a disruptive environment. More importantly, the outcomes of the collaborative approach highlighted the potential for other discipline teams to develop capabilities for dealing with future disruptive events.

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References

- Bartolic, S. K., Boud, D., Agapito, J., Verpoorten, D., Williams, S., Lutze-Mann, L., Matzat, U., Moreno, M. M., Polly, P., Tai, J., Marsh, H. L., Lin, L., Burgess, J., Habtu, S., Rodrigo, M. M. M., & Roth, T., Heap, T., & Guppy, N. (2021). A multi-institutional assessment of changes in higher education teaching and learning in the face of COVID-19. *Educational Review*. <https://doi.org/10.1080/00131911.2021.1955830>
- Bernard, H. R., & Ryan, G. W. (2010). *Analyzing qualitative data: Systematic approaches*. Sage Publications.
- Blackmore, J. A. (2005). A critical evaluation of peer review via teaching observation within higher education. *International Journal of Educational Management*, 19, 218–232.
- CQUniversity Australia. (2019). *CQUniversity Strategic Plan 2019–2023*. <https://www.cqu.edu.au/about-us/about-cquniversity/strategic-plan-2019-2023>
- CQUniversity Australia. (2020, November 30). *Assessment policy and procedure (higher education and coursework)*. [https://www.cqu.edu.au/policy/sharepoint-document-download?file_uri=%7BBE8380F3-F86D-4C55-AC0D-84A81EAFD6A2%7D/Assessment%20Policy%20and%20Procedure%20\(Higher%20Education%20Coursework\)%20\(current%20version%20-%20Term%203,%202020\).pdf](https://www.cqu.edu.au/policy/sharepoint-document-download?file_uri=%7BBE8380F3-F86D-4C55-AC0D-84A81EAFD6A2%7D/Assessment%20Policy%20and%20Procedure%20(Higher%20Education%20Coursework)%20(current%20version%20-%20Term%203,%202020).pdf)
- CQUniversity Australia. (2020b). *CQUniversity 2020 Annual Report*. <https://www.cqu.edu.au/about-us/structure/governance/annual-report>

- Guppy, N., Verpooten, D., Boud, D., Lin, L., Tai, J., & Bartolic, S. (2022). The post-COVID-19 future of digital learning in Higher Education: Views from educators, students, and other professionals in six countries. *British Journal of Educational Technology*, 00, 1–16. <https://doi.org/10.1111/bjet.13212>
- Pownell, M., Harris, R., & Blundell-Birtell, P. (2022). Supporting students during the transition to university in COVID-19: Five key considerations and recommendations for educators. *Psychology Learning & Teaching* 2022, 21(1), 3–18. <https://doi.org/10.1177/147572572110324846>
- Saldána, J. (2016). *The coding manual for qualitative research* (3rd ed.). Oxford University Press.
- The Quality Assurance Agency for Higher Education. (2018). *Expectations and practices for assessment—Guiding principles*. <https://www.qaa.ac.uk/en/quality-code/advice-and-guidance/assessment>
- Thompson, N., & Pascal, J. (2012). Developing critically reflective practice. *Reflective Practice*, 13(2), 311–325. <https://doi.org/10.1080/14623943.2012.657795>
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge University Press.
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225–246. <https://doi.org/10.1177/135050840072002>
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice*. Harvard Business School Press.
- Wenger, E., Trayner, B., & de Laat, M. (2011). *Promoting and assessing value creation in communities and networks: A conceptual framework*. Open University of Netherlands.
- Wenger-Trayner, B., Wenger-Trayner, E., Cameron, J., Eryigit-Madzwamuse, S., & Hart, A. (2017). Boundaries and boundary objects: An evaluation framework for mixed methods research. *Journal of Mixed Methods*, 1–18. <https://doi.org/10.1177/1558689817732225>
- Wenger-Trayner, E., & Wenger-Trayner, B. (2020). *Learning to make a difference: Value creation in social learning systems*. Cambridge University Press.



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Challenges in Conducting Online Assessments: Experiences of Management Faculty Members in Nepal Higher Education

Milan Gyanwali and Shrijan Gyanwali

Introduction

The Covid-19 pandemic made higher education institutions (HEIs) move assessments from face-to-face to online platforms. This move invited unprecedented issues and challenges to assessors, institutions and students. Those issues were new to everyone involved in the HEIs. Therefore, preparing and making clear policies in advance were beyond imagination. The newly developed situation raised the concerns about assessment environment, assessing policies/guidelines and individual responsibilities.

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The lockdown had a significant impact on the whole assessment system—input, process and output. The input—which comprises infrastructure, information technology and capable human resources—had many challenges in dealing with the situation. The universities in the developed economies had sufficient input, but the assessment processes, policies and assessor roles were not very clear. Such unclarity affected the quality of online assessments. In contrast, many universities in less developed economies suffered from the resources which affected the delivery of assessments. Similarly, the change in the assessment process was huge which affected every institution, lecturer and student. Even the universities with distance teaching and learning provisions found it challenging to conduct assessments online on a large scale. Hence, we can only presume the difficulties faced by the universities which were little prepared for the remote assessments and assessing materials. Finally, the outputs (assessment results) were scrutinised due to the raised concerns of reliability, fairness and validity. In particular, higher grades in the lockdown drew the attention of academic dishonesty—see Weale (2021).

In the context of assessing students in lockdown, universities can be divided into two types—resource-intensive and low-resource intensive. The experiences of resource-intensive universities are softer/simpler than those with low resources. As Watermeyer et al. (2021) pointed, a significant number of universities had little or no use of a virtual environment for the summative assessments. The lack of resources raised the questions of reliable processes and quality outputs. How do the faculty members organise remote assessments? How do they make the assessments reliable, fair and valid? What is the outcome like? These questions can be answered by exploring the experiences of faculty members in low-resourced institutions.

Hence, this study aims to explore the lived experience of management faculty members of Pokhara University in Nepal and examine the reliability, fairness and validity of practised assessments. The lessons learned from the experiences could be used to develop future strategies for assessing in a virtual environment.

Traditional Approaches to Assessment in HE Business Programmes

Among the numerous assessments, the traditional approaches are well-established in HEIs which test the skills, knowledge and attitude by checking the factual knowledge, writing speed, thinking ability and meeting deadlines. Since these skills are transferrable to work and life, the importance of the traditional approaches is expected to be very high (Webb & Powis, 2004). Essentially, these assessments are delivered face-to-face, but the lockdown made the assessors use these approaches in the virtual environment. Therefore, the question here is—are those approaches compatible with online delivery? If so, what are the lecturers' experiences?

To find out the compatibility, mostly used approaches are reviewed in the context of management discipline.

Written exams are predominant for summative assessments in HEIs which are usually organised in a time-constrained manner. The written exams include unseen, partly seen and open books. In addition, the development and integration of technology in assessment have boosted the practice of written exams in the virtual environment. The determination of reliability, however, is more complex in the management discipline, as the context determines the correctness of the response. Therefore, assessors find it challenging to make exams reliable, valid and transparent (Race, 2015).

The second on the list is the structured exams that comprise multiple-choice questions, quizzes and sequencing questions. They are convenient to use because of their simplicity, authenticity, reliability, syllabus coverage and time savings. In contrast, they are criticised for guessed answers, memory focus and difficulty in setting quality questions (Race, 2015). These assessment approaches can be used to test both factual knowledge and understanding of the topic. Even though the structured exams were designed for face-to-face situations, the popularity of online mode has recently increased.

Similarly, the coursework takes a strong position for both formative and summative assessments in the management discipline. It is organised

in different forms including essays, reports, projects, posters and portfolios. The coursework has multiple benefits such as freedom of expression, depth of understanding and high authenticity. Despite the association of coursework with face-to-face assessment, its use in a virtual environment has increased rapidly—see Race (2015) and Richardson (2014).

Moreover, group work is one of the essential skills required for teams and organisations which plays a substantial role in making organisations successful. To develop such skills, group work is practised to assess the students in business and management discipline using presentations, projects and reports. Students are expected to gain contextual skills and knowledge through these assessments. The online form of group work has got more attention recently—see Mellor (2012).

Similarly, oral exams are very common in the management discipline. They usually involve multiple assessors who check different components of the given task. Even though the oral exams best suit face-to-face situations, they are changing their faces to include podcasts and online presentations due to the technological integration. As a result, the popularity of oral exams has also been increased significantly (Hazen, 2020).

From the above-discussed review, it is learned that the traditional assessment approaches can also be used in virtual environments with a slight adjustment in the processes. However, the literature is silent about the remote assessment experiences from low-resourced institutions. Hence, this study attempts to fill a gap of lecturer experience in the literature. The new knowledge to deliver reliable, fair and valid assessments in similar situations.

Assessment Practice in the Business Programme at Pokhara University

To understand the lived experience of the online platform, we chose the Management Faculty of Pokhara University. The university was established in 1997 as a public organisation. It has 67 academic institutions—4 constituent, 4 joint-constituent, 1 doctoral council and 58 affiliated colleges. The university has four faculties—management studies, health

sciences, science and technology, and humanities and social sciences. In the management faculty, 18,000 students were doing their courses in 2020–2021 which accounts for more than 55% of total students in the university.

The management faculty runs both undergraduate and postgraduate programmes. A two-year-long Master of Business Administration (MBA) is the most popular programme of the faculty. Out of 2551 MBA students, 255 were studying at the central campus (Pokhara University, 2021). This programme has been chosen as it has the least number of face-to-face assessments (group work and written exams).

The MBA programme has two types of summative assessments—internal and external. The internal assessment contributes 60% to the final grade which comprises quizzes, home assignments, class tests, presentations, class attendance and term papers. These assessments are designed, organised and delivered by the module leaders. In contrast, the exam control office organises and delivers external assessments. These assessments are usually organised as unseen written exams that contribute 40% to the final grade (Pokhara University, 2021), and the faculty members have little to do with external assessments. Therefore, this study only covers the internal assessments.

One important point to note here is the practice of relative grading systems in the faculty. It is a method to assign the grade point to students on the basis of group/cohort performance. This practice only applies when there are more than 30 students in one subject/module.

Methodology

As discussed earlier, this study explores the lived experiences of the management faculties of Pokhara University. The lived experiences are complex phenomena that include tacit information and integrate with multiple facets. Therefore, it is necessary to understand the nature of data before discussing how it was collected, processed and analysed.

The Nature of Data

The faculty members expressed their experiences using spoken language which is very difficult to understand without knowing the person, problem and environment. Unfortunately, we have limited methodological choices to understand such complexities—phenomenology (Heidegger, 1962; Husserl, 1970), action research (Lewin, 1946; Susman & Evered, 1978) and ethnography (Campbell & Lassiter, 2015).

Among these approaches, action research was off from its scope as the researchers were not trying to find a better way of conducting assessments (Susman & Evered, 1978). Instead, they were focused on investigating the assessment experiences of others in lockdown. Similarly, the ethnography was not suitable either, as the researchers were not involved in the assessment processes (Campbell & Lassiter, 2015). Therefore, in the given situation, phenomenology was the only possible option for the researchers to investigate participants' lived experiences (Van Manen, 1990). However, it is essential to note here that the experiences are subjective interpretations and may not be bias-free.

Considering these facts and taking the recommendation of Neubauer et al. (2019), we employed hermeneutic phenomenology. The hermeneutic approach includes the 'being of the person' at the time of experience. Being part of the individual is fundamental as people start making sense of the experiences based on their skills and knowledge. Therefore, people may have different experiences even though they go through the same process. In this case, the research participants went through the same assessment processes but gained different experiences.

Data Collection

Due to the nature of the data, we expected to give a cumulative sense of experience to a greater number of respondents. To cover a wider experience, we called 18 out of 36 faculty members randomly for group interviews and sent invitations via email. However, only 11 lecturers managed to attend the interviews.

We were fully aware of the time constraints of the academics. Therefore, the interviews were organised to match the availability of research participants. To include as many faculty members as possible, we organised three group interviews on different days. We also used exploratory questions—like ‘can you please expand this a bit more?’ and ‘what do you mean by that?’—to minimise the Hawthorne and groupthink effects.

Using the interview approach as recommended by Salmons (2012), we conducted online interviews. Those interviews were planned for one hour and divided into three sections—introduction, conversation and conclusion. During the introduction, we introduced the research project, discussed the purpose, provided the information sheet and gained informed consent. The introduction session was followed by explorative and open-ended questions which were informal in nature. Finally, we asked concluding questions to conclude the conversation, including:

- How did you find the assessments during the lockdown?
- What was the experience like in assessing online?
- How did you move assessments from face-to-face to virtual environments?
- How did you learn different assessing practices?
- What were the reasons behind using multiple approaches for module assessment?
- How could you improve the assessment practices in your subject?

During the discussions, we noted the main points and before the end, we provided opportunities for questions and clarifications. This action helped the research participants express their thoughts beyond the interview questions. It also helped us reflect on whether any vital information was missing.

Data Processing

The interview data were transcribed and translated into English as they were collected in the Nepalese language. Then, the researchers translated the transcripts and digitised them using MS Word. To keep the essence of

expressions, we coloured the texts—red to reflect ‘strong negative’, blue to reflect ‘strong positive’, amber to reflect ‘mild’ and black for the rest.

Similarly, we also assigned different symbols to reflect the notion and confidence in expressions—exclamation mark (!) to show full confidence, percentage (%) to show the similarity of ideas from the previous speaker and star (*) to show the doubtful expressions.

Despite requesting not to call by name during the interview, keeping it strictly was almost impossible. Moreover, the anonymised texts made us difficult to make sense of different ideas and link them with associated respondents. We also noted that the mixed-up experiences could lead the investigation to unreliable ends. Therefore, we anonymised research participants whilst transcribing the interviews. To reiterate—we processed data keeping the original notion, expression and experiences of all individuals.

Data Analysis

We interpreted the data using thematic analysis (Xu & Zammit, 2020) accompanied by empathetic interpretation (Ricoeur, 1970). The interview notes were used to start the analysis instead of having open codes from the entire text. We started the process by searching frequently used terms in the whole text and marked their location. Then we searched for synonyms of those frequently used terms. We continued the ‘search and locate’ process until all the relevant phrases were processed fully.

The location of the terms was examined to find the meaning of the language in the context. By doing this, the themes were extracted in the form of words, meanings, essences and notions. Next, we listened to the interview records again to confirm whether the meaning was kept in translation. Then, we used a narrative style to analyse the data.

So far, we have discussed the changing context, types of assessments, assessing approaches and research methodology. This is the time to discuss the findings and analyse the experiences of the management faculties of Pokhara University.

Findings and Analysis

Despite assessing students of the same programme and level in the online mode, the teacher experiences were very distinct. For example, some teachers learned more about resource availability, whilst others learned about the assessment process and outcome. Hence, the lived experiences are divided into three types aligning input, process and output.

Learning was Phenomenal

Assessing student competency during the lockdown was a provoking experience for the management faculty members. It was mainly because of the lack of appropriate inputs, including infrastructure, physical resources and skillsets. The foremost issue in the faculty was the infrastructure. The university had no compatible infrastructure to launch assessments in the virtual environment. Unreliable electric supply and disrupting internet service were not only the issues for such experiences. There were far more lackings which included cybersecurity, disaster recovery, service desk and appropriate software. It is important to note that the assessment processes and outputs rely on the built infrastructure which was very weak.

The lack of physical resources also contributed to their experiences. In assessment, the physical resources refer to any devices used to organise and deliver assessments on the online platforms. The management faculty did have sufficient physical resources for the faculty members but not for the students. It was learned that,

FG-03-Q1 ...probably, it may be obvious that all the faculty members and students have no computer and internet access. There are sufficient laptops for the teachers but not for the students. Beyond laptops, there are other issues like the reliability of power and internet services. This situation brings two concerns. Firstly, how can one expect to organise online exams? And secondly, how can it be reliable and fair?

This excerpt tells a lot about the complexity of delivering remote assessments in the absence of resources such as computers (laptops), power supply and internet accessibility.

The third area of input that hindered online assessment was the skill-set. Even though the faculty was integrating the IT system in teaching and learning activities, the members did have little or no remote assessment experience. The obvious question is - If you are not familiar with online assessments, how can you deliver them?

FG-02-Q3 ...actually, we were in the middle of nowhere. We heard about the online assessments but did not know how to do them. ...forget about assessing online. Many faculty members do not use institutional emails. Being empathetic to students, we doubt they check their emails regularly. In this circumstance, we question ourselves—how can we be fair and reliable?

The question raised by participants helps us to understand the use of IT systems at both institutional and student levels. Whatever the reasons were, the impacts were enormous. Such lacking interaction with students invites issues of reliability, fairness and transparency.

It was also understood that the faculty was not prepared for any issues of this scale. Such thoughts were expressed in a discussion.

FG-01-Q2 ...we have very well-known and experienced lecturers in the faculty. However, the emerging issues were far bigger than we could assume. We were not prepared to tackle big issues like this. That is what we learned from this situation.

However, the situation did not stop organising online assessments. The immediate question was—how was it possible? Perhaps, the straightforward answer is—by learning in lockdown. The following excerpt is one such example of how the faculty members learned.

FG-02-Q1 ...I was called from India for a PhD Viva Voce. They provided all the information to set up the exam. That was the entry point for my learning. Then, I looked at the practices of open universities which I discussed with colleagues, and we learned together.

Even though this looks simple and easy now, it was a big lesson at that time. The learning was phenomenal in the absence of institutional support. Faculty members started delivering the sessions from Zoom and ended with MS Teams.

Even though the learning part was done well, the institutional policy part was still unclear. The management faculties, however, conducted the internal assessments without approval. That was a risky step as the assessments were not reversible. Later, the university board approved the assessments, which relieved the faculties from the uncertainty of unapproved but proactive efforts.

We understand that learning made it possible to conduct assessments in the virtual environment. However, we are also aware that there were multiple issues with the internet, power cuts and communication. In that situation, how can an assessment be reliable, fair and valid? What was the experience of the faculty members? The following subsection revolves around these questions.

Processes Play a Vital Role in the Quality

As mentioned earlier, the process plays a vital role in making assessments reliable, fair and transparent. The process-related concerns, such as what assessment approaches to choose and how to deliver them, were still unclear.

These issues were resolved by discussing and sharing with faculty members who realised the challenges of making assessments fair due to the limited resources and unreliable infrastructure. Keeping these issues in mind, faculty members wanted to have a similar pattern in all modules, such as subjective questions, quizzes, presentations and classroom attendance. However, delivering the subjective assessment was the main challenge for them.

FG-02-Q2 ...for the subjective questions, we released the questions 10 minutes before the scheduled exam. We asked students to keep the camera on. We made them maintain academic honesty by observing on the camera. We asked them to take pictures of their works and send them to us via email.

Despite having limited resources and unreliable infrastructure, the organisation part of the assessment was successfully conducted. However, the submission part was not smooth due to the slow internet, as the lecturers received emails even after 36 hours of submission. In addition, the received documents had some missing pages, and the pages were not in the correct order.

The faculty members also insisted that designing objective assessments like quizzes and multiple-choice questions was time-consuming; even so, it used to be straightforward in organising and delivering. They realised that the use of MS Teams reduced time and increased effectiveness by reshuffling questions, reordering options and calculating scores. The integrated assessment system also resolved the issues with missing pages. The faculty members found online platforms easy to design and deliver objective assessments. But they found it challenging to keep the records safe and protected due to the limited infrastructure (FG-01-Q3).

Moreover, other assessment approaches such as classroom attendance, participation and engagement were marked in the usual manner by keeping records and their contribution to the virtual classes.

The assessors confirmed that the assessment process was transparent. However, the question of reliability, fairness and validity needs further investigation. These aspects are discussed in the following subsection.

Results may Conflict with Student Quality

The grading output was positive despite the difficulty of organising assessments during lockdown with limited resources and unclear processes. The quality of written work and the creativity shown in the papers were outstanding. Even though the secured grades in the normal distribution curve shifted towards the right, they are not reflected in the final grade because of the relative grading system. A better output was experienced across the assessments and modules. The faculty members witnessed higher accuracy in objective questions and more criticality in subjective ones.

One of the faculty members reflected that the works/assignments submitted by the students were unexpectedly good. It is possible to see some

quiet students doing exceptionally good in the exams but doing good by all the students is rare. Such success rates raised concerns academic dishonesty. How can students write better in online exams even when they have limited resources and most negligible interactions in teaching? The outcome made a senior member investigate more about student answers.

I asked students—how can you be better in lockdown? The answer was fascinating. One student answered—in face-to-face classes, we used to rely on teachers; we used to have many excuses not to study. During the lockdown, we were inside the house to focus on our studies. Even on the phone, either we used to discuss coronavirus or talk about modules and exam preparations. Not only because of our interests, but parents also played a vital role. We know them now—they spy on us about what we do. As a result, we were forced to study.

The student responses were diverse, though. Another student said—for the first time in my life, I attended all the lectures. Usually, in the morning, I used to miss the bus. That means one lecture is gone. Coming home with friends means missing another lecture, and a tea break means another is missed. These all stopped in lockdown. Actually, I enjoyed studying.

That was an incredible experience. However, this experience was not shared in all modules. A senior lecturer shared a distinct experience:

FG-01-Q3 ...when I was marking the exam papers, I found similar information in a few papers. We have no system of checking similarities. Therefore, I had to go through them one by one. In the end, I learned that 15 papers were identical. I asked students why did that happen? I learned that they had issues with the internet and power cuts. On the exam day, fifteen students gathered in a house, discussed the questions and wrote answers. I do not know whom to blame here—the government, the university, the students or me. Whom should I punish? Without punishing any, I released the grade based on their written work.

These contrasting experiences tell something about how the students secured higher grades in assessments. However, there is no evidence of a better learning experience due to the lack of contextual measures. This study reveals that the assessing experience depends on resource

availability, preparedness and assessment policies or procedures. The outcome is not much different from the study of Guangul et al. (2020). They also identify the issues with academic honesty, infrastructure and learning outcome. More than this, we also learned that reliability, fairness and validity are contextual phenomena.

Lessons Learned from the Online Assessment Practice in Nepal

The lockdown has changed the landscape of assessment in HEIs in two ways. Firstly, it opened the possibility of remote assessment. Even the low-resourced institutions could organise and deliver assessments on virtual platforms. We witnessed that remote assessments have multiple benefits, including flexibility, output and cost-effectiveness. However, online assessments also have drawbacks in terms of reliability, fairness and validity.

Secondly, it showed the importance of organisational preparation. The more the institutions and lecturers are prepared for uncertainties, the easier the assessment process will be. However, how much one should prepare is not very clear. It was learned that the management faculties put individual efforts into making the assessments take place. Those irreversible efforts made the faculty members worried and concerned about the approval.

The risks and concerns associated with remote assessments could be resolved by implementing three strategies along with reliable infrastructure and physical resources. The input strategy comes at first. We have learned that by creating a learning environment, lecturers will be willing to adopt changes to their practices. The learning environment will help faculties to be more proactive in designing, organising and delivering assessments. The process strategy also plays a vital role in making the assessments reliable, fair and valid. Therefore, it is necessary to make clearly stated remote assessment policies and communicate them effectively. The third one is the output strategy which should help to reduce the problems with academic honesty. Having clear policy and procedure,

on the one hand, and implementing them properly, on the other hand, will help to reduce the issues in assessments.

Of course, there is no clear demarcation between these strategies. They overlap, and there are many grey areas. So, by having layers of complementing policies, the issues with reliability, fairness and validity could be resolved. Therefore, what should be included in these strategies is a matter of further discussion and investigation.

Conclusion

We learned that the recent lockdown made HEIs deliver face-to-face assessments in the virtual environment which had varied impacts on the institutions, lecturers and students. The experiences of the faculty members were different from person to person. In the cumulative term, however, the experience of lecturers in the business and management discipline in Nepal was provoking. It was because of the unreliable infrastructure, limited resources and unclear assessment policies.

Despite the difficulty of assessing online, the output (assessment results) was unexpectedly improved. The quality of the written work was better, and the grades were higher compared to the face-to-face assessments. Such outcomes also raised the questions of learning in lockdown and academic dishonesty. Therefore, further research is recommended to investigate the lived experience of more academics and students in the discipline.

References

- Campbell, E., & Lassiter, L. E. (2015). *Doing ethnography today: Theories, methods, exercises*. Wiley Blackwell.
- Guangul, F. M., Suhail, A. H., Khalik, M. I., & Khidhir, B. A. (2020). Challenges of remote assessment in higher education in the context of Covid-19: A case study of middle east college. *Educational Assessment, Evaluation and Accountability*, 32, 519–535.

- Hazen, H. (2020). Use of oral examinations to assess student learning in the social sciences. *Journal of Geography in Higher Education*, 44(4), 592–607.
- Heidegger, M. (1962). *Being and time*. Blackwell.
- Husserl, E. (1970). *The idea of phenomenology*. Martinus Nijhoff.
- Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, 2(4), 34–36.
- Mellor, T. (2012). Group work assessment: Some key considerations in developing good practice. *Planet*, 25(1), 16–20. <https://doi.org/10.11120/plan.2012.00250016>
- Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspectives on Medical Education*, 8, 90–97.
- Pokhara University. (2021). General information. <https://pu.edu.np/about-us/general-information/>
- Race, P. (2015). *The lecturer's toolkit: A practical guide to assessment, learning and teaching* (4th ed.). Routledge.
- Richardson, J. T. E. (2014). Coursework versus examinations in end-of-module assessment: A literature review. *Assessment & Evaluation in Higher Education*, 40(3), 439–455. <https://doi.org/10.1080/02602938.2014.919628>
- Ricoeur, P. (1970). *Freud and philosophy: An essay on interpretation*. Yale University Press.
- Salmons, J. (2012). Designing and conducting research with online interviews. In J. Salmons (Ed.), *Cases in online interview research* (pp. 1–30). Sage.
- Susman, G. I., & Evered, R. D. (1978). An assessment of the scientific merits of action research. *Administrative Science Quarterly*, 23(4), 582–603.
- Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd ed.). Routledge.
- Watermeyer, R., Crick, T., Knight, C., & Goodall, J. (2021). COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education*, 81, 623–641. <https://link.springer.com/article/10.1007/s10734-020-00561-y>
- Weale, S. (2021). Cheating on the rise in the UK universities during Covid, say researchers. *The Guardian*. <https://www.theguardian.com/education/2021/feb/10/cheating-on-the-rise-in-uk-universities-during-covid-say-researchers>
- Webb, J., & Powis, C. (2004). *Teaching information skills: Theory and practice*. Facet Publishing.
- Xu, W., & Zammit, K. (2020). Applying thematic analysis to education: A hybrid approach to interpreting data in practitioner research. *International Journal of Qualitative Method*, 19, 1–9.



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Developing Teacher Expertise: Assessing the 'Micro-Teach' Online as an Alternative to Classroom-based Teaching

Lucy Spowart, Tristan Price,
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Introduction

It is widely acknowledged that digital technologies can provide a range of benefits to learners, such as enabling the flexibility of teaching and learning anywhere and at any time (Chauhan, 2017; Murray et al., 2020); however, less is known about the assessment of teacher-expertise (King, 2019) in the online environment. The development of teacher expertise requires the teaching practitioner to strengthen theory/practice connections to consciously question their practice, try out new approaches to delivery and be open to exploring new opportunities (Turner & Spowart, 2022).

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An unprecedented number of articles have been published since the start of the global pandemic on the topic of emergency remote teaching. These explore the experiences, from both staff and student perspectives, of the rapid move to online learning as a consequence of campus closures. Some have specifically looked at the experiences of pre-service teachers moving their learning to an online environment (e.g. Moorhouse, 2020; Ogbonnaya et al., 2020; Quezada et al., 2020). Whilst these provide helpful information about the barriers and enablers to online learning, they do not explicitly focus on experiential learning via the practical delivery of teaching episodes. Nor do they discuss how the practical skills of teaching might be assessed online. In fact, Moorhouse notes that ‘activities such as micro-teaching are not easy to facilitate’ in the online environment (Moorhouse, 2020, p. 610), and his paper outlines a number of changes that were made to an initial teacher education programme in Hong Kong, including the removal of the micro-teach.

A micro-teach is a mini teaching episode (usually around 15 minutes), designed to assess the learners’ practical teaching skills and understanding of underpinning pedagogical principles. Work is beginning to emerge that includes researching new forms of practice, such as students delivering micro-teaches online. Whilst this work is emerging in the field of initial schoolteacher education (See Ferdig et al., 2020 for a number of examples), there is a dearth of literature which explores the experiences of educators in other fields.

In this chapter, we employ a case study approach, with the aim of capturing the lived experiences of frontline healthcare professionals (doctors, nurses and dentists) and intercalating medical students, enrolled on a Postgraduate Certificate in Clinical Education during the 2019/2020 and 2020/2021 academic years when the UK went into lockdown due to Covid-19. Specifically, we focus on the delivery and assessment of the micro-teach. Rather than remove this practical assessment from the programme, it was decided that students would facilitate a short teaching episode online to maintain the authentic nature of the assessment and to build theory/practice connections.

Clinical Education Programme at the University of Plymouth

Clinical education is well-established at the University of Plymouth's Faculty of Health, reflecting the mission to foster excellence and innovation across the healthcare professions. The overall aim of the Postgraduate Certificate in Clinical Education is to improve health outcomes through enhanced educational practice and to facilitate real change in the quality of clinical care and health for individuals. The course provides an exploration of educational theory and its relationship to adult learning in higher education (HE) and work-based, clinical environments, together with an exploration of current issues in clinical education. The course has currency and direct relevance to clinical participants who frequently find themselves in teaching, mentoring and assessing roles, whether formally or informally. For example, the General Medical Council's Good Medical Practice guide stipulates that doctors are expected to mentor and contribute to the education of others (General Medical Council, 2020).

There are two pathways available that culminate in a teaching qualification and professional accreditation: a face-to-face pathway and a distance learning pathway. Participants identify the route that best suits their individual needs and would, under usual circumstances, complete the entire 60 credits in their chosen mode of delivery. The face-to-face pathway is traditionally delivered on-campus as 6 whole teaching days per module. End of course evaluation data identifies a number of reasons behind the choice to enrol on the face-to-face pathway including: a preference for face-to-face teaching over online teaching; the opportunity to interact and network with co-participants from a variety of healthcare contexts; and securing protected study time away from busy clinical work environments.

It is a common practice on postgraduate teaching courses for students to be encouraged to engage in interactive teaching practices 'oriented to and focused on students and their learning' (Devlin & Samarawickrema, 2010, p. 112). Plymouth's Postgraduate Certificate in Clinical Education is no exception. Fifty per cent of the assessment for the 'Contemporary Issues' module is dedicated to students' planning, facilitating and critically

reflecting on their ‘micro-teach’ with the goal of developing teacher expertise. The module is accredited by Advance HE at Descriptor 2 and aligned to the UK Professional Standards Framework (UKPSF). Assessors place great emphasis on the students’ ability to engage a small group of learners during a teaching session that is appropriately pitched and inclusive.

The micro-teach assessment is a good example of an authentic assessment (Sotiriadou et al., 2020) and is frequently reported as one of the most useful aspects of the face-to-face pathway, providing the opportunity for participants to engage in a purposeful process of designing, delivering and evaluating teaching and learning approaches. To this end, clinicians are supported to cultivate their own ‘teaching toolkits’ and extend their existing knowledge and skills.

Planning for the assessed micro-teach was well underway when the UK government announced the first lockdown in March 2020. This impacted the cohort in a number of ways, not least the disruption to their work schedules as key workers. Rather than replace the micro-teach, in consultation with students, the teaching team decided to deliver and assess the micro-teach component online. The second lockdown impacted the September 2020 intake in a similar vein. By capturing the experiences of participants on these two cohorts, we outline the factors that contributed to a successful approach, the barriers encountered, and how this online practical assessment can be constructed to optimise students’ learning in the future.

Research Approach

We obtained ethical approval for the study via the Education Faculty’s Research Ethics Committee and participants were subsequently invited to take part via email. All three authors were involved in devising a semi-structured interview protocol to capture the participants’ reflections about the micro-teach. The third author, an intercalating Masters student, conducted an initial pilot interview to assess the quality of the interview questions and the type of responses generated. We recruited a total of 12 healthcare professionals who were asked to reflect on their experiences of the online teaching assessment. We were also interested in participants’ general perceptions of teaching and assessment online and

whether the micro-teach experience had changed or shaped their views in any way. The interviews developed as conversations (Burgess, 1984) enabling related topics to be explored depending on personal experience.

The third author conducted the interviews via Zoom videoconference, and they lasted between 30 and 45 minutes. He then transcribed them using Sonix AI, a speech to text conversion software. We used the data management software QRS NVIVO 12 to code the data independently at first, and then met to refine the coding framework. The data were then analysed inductively by the first author to establish cross-cutting themes (Silverman, 2013). The first author also had access to an anonymous online module evaluation to support the findings. In the next section, we outline the key themes that emerged from the interview data.

Findings

All of the micro-teaches were delivered individually. This is a requirement of the assessment task which is designed to assess students' pedagogical knowledge and facilitation skills. The chosen content for the 15-minute task varied enormously. Some students opted for skills-based sessions relevant to their particular job roles. For example, one student chose to teach the practical skills of suturing and engaged their learners by use of a pre-recorded video demonstrating the correct technique. She then challenged her learners to rehearse the technique using trainers and shoelaces! Other students focused on engaging students intellectually in small discussion groups using the break-out room feature of Zoom. For example, one of the dentists on the course had the following learning outcome for her session: 'To explore the ambiguity around unprofessional behaviours in UK dentistry'. This student followed up the small group discussions by using Mentimeter, an online presentation tool, which enables students to interact via quizzes and polls.

From the perspective of the staff involved, students generally performed very well in the micro-teach, with the move to online assessment appearing to enhance their critical approach, stimulate innovation and encourage risk-taking. Grades awarded matched or bettered those of previous cohorts.

Initial Reactions to Migrating Online

Participants expressed a range of reactions to being told that they would deliver their micro-teach assessment via Zoom. These included being: 'worried', 'fed up', 'concerned', 'fine' and 'quite happy'. Whilst those more comfortable with the use of digital technologies were not unduly phased by the shift, there was an overall consensus that the experience was 'definitely different'. Whilst the assessment brief and associated marking rubric required students to prioritise opportunities for learner-engagement, some students felt the need to alter their pre-existing plans to a more didactic approach to delivery. Conversely, the online mode posed challenges for some attempting to replicate their original ideas designed for the classroom. Others noted the 'limits' of being online and acknowledged that the classroom was their 'comfort zone' as the following quote illustrates: 'I think it's fine. But I would prefer to be assessed in person, if possible'.

Given the nature of this group, whose work centred on in-person interactions with patients, it is perhaps surprising that only four participants explicitly stated a preference for a classroom-based teaching assessment.

I think there are certain things that are delivered much better in person, you know, things like life support courses, you know, I'm aware that people have tried to do this virtually and you can still get the same credit for it. But I feel like those very active things that you need to get 'hands on' should definitely stay 'hands on'. And if you're just giving a lecture, which, you know, if you're going to give it in a lecture hall, giving it online I think is a suitable alternative. (P5)

What was apparent throughout was the tendency for participants to make direct comparisons between online and face-to-face delivery. Face-to-face teaching was discussed in terms of the 'normal', and online teaching was the exception to this norm. This is not unforeseen, given that the context the assessment took place—during the Covid-19 pandemic—was anything but normal. Even those students who were positive about the experience tended to frame the online assessment as a compromise

option for these circumstances, frequently drawing on words such as 'real' or 'normal':

Yeah, it would have been a lot easier to if it was in a 'real' environment. (p. 1)

So I think ... about what different activities you can use in the online environment, it just gives you a different aspect to a normal [teaching] day ... it just gives you an extra dimension to the presentation and actually the way that we go in using technology is it is it's not going to go away. So it's just nice to give you that experience. (p. 8)

This comparison was frequently based on limited exposure to online learning and often highlighted a lack of information about what could be achieved via Zoom and other digital technologies.

The Environment and Social-emotional Engagement

Environmental factors featured heavily in the participants' dialogue. The rapid re-organisation of domestic spaces inevitably impacted individuals very differently depending on their personal circumstances, particularly whether they had child-caring responsibilities. The strength of their internet connection and the availability of a distinct workspace also tempered individuals' responses. For some, undertaking the micro-teach from the comfort of their own home reduced the stress associated with the assessment task and negated the need to travel or to use unfamiliar technical equipment. Participants spoke of being 'less anxious', 'more relaxed' and 'comfortable':

I think actually if I had to present in person, it would be a lot more of a challenge, because I think when you're presenting in your home environment, you can set up in a way where you're more relaxed as a presenter. So in a way, I think it suited me a lot better to having the time to sort of get my presentation ready and ... you know, have breakfast, get to know what my timing is. I don't have to worry about traffic. ... And also the way that I have set up at home is I have two monitors so I can have the presentation sort of and, you know, being streamed or shared screens from one of my

monitors. I had all my teaching notes and other references easily at my disposal. (P7)

I did enjoy the fact that it was a lot less pressured. And because in my own home, I have my notes ... I felt easier to me to do it because I was in a calm environment and in my own home, yet it did provide me with a little bit of stress with the technology. (P3)

Others spoke of 'fatigue', 'isolation', a 'lack of peer socialisation' and a 'lack of motivation'. One student, who had worked collaboratively with other healthcare workers on the course in the preparation of her micro-teach assessment prior to lockdown, expressed a significant sense of loss at the moving of the teaching and the micro-teach assessment online.

I was looking forward to working, you know, sharing ideas and sort of progressing with the group. But when we went sort of remote, that all sort of stopped. So it was just then get on, on your own. (P2)

This student missed the emotional connectedness being in the classroom had provided her. She felt isolated and found it hard to prioritise her studies and maintain study/work-life boundaries once the requirement to attend university was removed. Describing her approach to attending classroom sessions she explained:

If you are physically attending a session, then you don't use your laptops... you shut your emails, you shut everything down, and you just go off into it. (P2)

Interactivity and the Development of Learner-centred Teaching

The challenge of interactivity in the online micro-teach was a theme in all interviews. Students expressed this in various ways, and not always negatively. For some, creating an interactive element to online teaching was a challenge that could be met through selecting an appropriate topic and approaching it carefully.

It made me a little bit more hesitant about having interactive elements because I was concerned that I would struggle to get people involved and kind of wanting to do things. In the end, I kind of went with a topic that in itself was interactive to try and avoid that. (P1)

It was basically they were able to use the Zoom annotations to sort of highlight what they felt was relevant. That works quite well. And actually, most of it was just a discussion. (P6)

Where students expressed apprehension of online learning, this was often based on a limited understanding of the technologies and how interactivity can be achieved. In the assessment brief, students were not required to use a PowerPoint presentation, but all chose to, assuming that this was a requirement of online teaching. Even for those who were positive about the online environment, there was an assumption that online interaction was more difficult to achieve.

And just being in the same environment, it's always been quite easy to implement practical things that you can teach people, quite simply. So, when it when I found out that this assessment would have to be online, I was quite worried about how I could convey that across a computer screen and how I could still engage people with only just using slides or just the image that they can see. (P1)

Reflecting on this afterwards, we concluded that our students reverted to being 'novice teachers' with a tendency for teacher-centred delivery (Sweeney, 1986) to maintain a strong element of control in an unfamiliar environment. We found this fascinating since all of the students interviewed had previously developed a range of creative interaction strategies in the classroom that they had at their disposal (e.g. ice-breakers, probing questions, individual exercises, snowballing techniques, paired techniques and small group work). All of these approaches can work very successfully via Zoom.

Another common theme was that participants valued the informal aspect of student–teacher interaction that occurs within the classroom.

Frequent reference was made to the importance of body language and developing a rapport with students.

What you lack here is a kind of innate immediacy. You know, we have a lot of people, a lot of things from body language. So that certainly, I think, is missing generally from online, they say there's a sort of sense of this being removed. (P9)

If it's talking to a blank screen, I can't see people's reactions. I find that more difficult because I can't gauge how much people are understanding me or if I need to slow down in terms of micro-teach because the cameras are on. ... I think what I gained from it being online was making a real conscious effort to take it to an individual level with each of the people and trying to ... kind of build a rapport. (P2)

The challenge for our participants it seems was not so much planning tasks that would require active learner involvement but being able to gauge the level of understanding. Participants desired that immediate feedback that comes from reading body language and gauging attentiveness.

Yeah, I'd say that the biggest thing about that micro-teach was that because it was online, it was harder to gauge people's opinions of what you were saying in terms of understanding that and the level of interaction and enjoyment. (p. 3)

And you have to plan your time a lot more differently. So with the online one ... I had in my mind that I'd have to do a lot more of the talking and there's probably less receptiveness and responsiveness from the audience, and it's really hard to gauge that in a virtual environment. (P7)

A Catalyst for Change and Innovation

The move to online assessment as a response to the pandemic may have encouraged the perception in some of our participants that the online micro-teach was the alternative to the 'normal' mode of face-to-face

classroom teaching. However, this was not the case for all of our participants, with some recognising that Covid-19 may have been a catalyst for inevitable change.

I think for some [the online teaching assessment] will definitely help. My understanding is a lot of consultants like [online teaching] because for them it's really easy to give an online talk. They've got the resources at hand. They don't have to go anywhere. And for them, it's a lot more time efficient. And also, for that clinical work as well, the use of virtual appointments. (P7)

And I think that there are benefits to it, particularly thinking about deaneries, universities, if you've got students who are away from the kind of main hub, then actually it's quite nice for everyone to be able to attend the same teaching events and get the same learning opportunities. (P4)

So being able to deliver it online so people can be anywhere in the hospital really and just dial in from wherever they are and make it a lot easier and it can be recorded. So if people can't make it, they can watch it later on. (P8)

It is noticeable in the aforementioned responses that the participants felt the advantages of online delivery were particularly relevant to the busy healthcare environment. These respondents were looking beyond the pandemic, to a future of clinical teaching in which online delivery would inevitably play a role. Moving the assessment online therefore potentially increased the authenticity of the task. Healthcare is after all a precarious and challenging environment.

Discussion

The global viral pandemic has forced changes to the very nature of clinical education, and many have had to explore alternative ways of teaching and assessment. Despite the forced relocation to an online space, the underpinning principles of experiential learning drove our decision to continue with the assessed micro-teach.

Being able to undertake a practical teaching episode provided an authentic assessment opportunity for students to engage in reflective practice with fellow students and with their tutor. It also enabled students to interrogate their own assumptions about how interactivity can be achieved in the online environment. Whilst this challenged some students beyond their original expectations, student reflections demonstrate that significant learning occurred.

Reflective practice is integral to the development of all educators, regardless of the sector in which they teach (Clegg et al., 2002), and is widely used to frame professional learning in practice-based disciplines. Whilst some students would have preferred to have been assessed in the classroom, staff observation, student grades and interviewee feedback points to the fact that the online micro-teach provided opportunities for students to enhance their educational practice and develop a range of teaching skills. All learners passed the assessment and in so doing achieved the intended knowledge, skills and attitudes that were the focus of the module learning outcomes.

Murray et al. (2020) in their reflections of teacher education online during Covid-19 refer to ‘virtual or disembodied spaces’, not classrooms, but spaces where the reflexivity of teaching practice is still possible. However, whilst our experiences demonstrate that practical teaching can be assessed online, we are mindful of the diverse environmental impacts on this small group of students. Engaging and supporting student teachers in an online space requires us to interrogate our practices as teacher-educators to ensure that we maintain emotional connections between students and develop positive student–teacher relationships.

Conclusion

Experts in online assessment advocate design that is authentic, accessible and supported by formative assessment (JISC, 2020). While some studies in the realm of undergraduate education have described a situation of ‘temporary adjustment’ to online learning and an expectation that ‘things will return to normal’ (Neuwirth et al., 2021, p. 143), our postgraduate clinical educators expect that online teaching will increase in the coming

years. Therefore, we may be doing a great disservice to our student-teachers if we do not give them the opportunity to learn to teach, and to be assessed teaching, in this environment. It seems that the assumptions about what can and cannot be achieved online were the key factors that determined how our participants engaged in this assessment task. It therefore stands to reason that, as teacher-educators, we need to introduce our students to the range of possibilities available with online teaching.

As we move forward (to hopefully post-Covid times), we will seek to maintain a supportive educational environment that ensures our student-teachers are given the tools to develop and progress in the face of adversity and exceptional challenge. In order to achieve this aim, we have taken two key learning points from our experience with the online micro-teach. Firstly, we need to normalise the delivery of online teaching from the outset, encouraging students to apply their understanding of pedagogy to the planning of BOTH online and face-to-face teaching activities. We need to challenge preconceptions that online delivery is the poorer cousin, the 'if needs must' mode of delivery. As our students recognised, online learning may have important benefits in terms of inclusive practice and enabling participation for harder to reach learners. Moreover, as noted in recent studies, these benefits may not only accrue to busy professionals in western learning institutions, but may also extend to those where geography and the associated difficulties of travel has served to highlight the limitations of the traditional classroom (Paudel, 2021).

As part of this process, we need to ensure our students are equipped with the relevant 'toolkit' for online teaching. This will include understanding the technical aspects that programmes such as Zoom and Microsoft Teams can offer to engender an interactive and immersive experience. This also includes ensuring our students understand the common features of good teaching in BOTH face-to-face and online delivery. Interactive teaching is more effective in any format when it is planned, and the way in which online teaching necessities this planning provides an opportunity to instil this skill in our student-teachers. Perhaps most importantly, even when we are 'back in the classroom', we need to model good online teaching in a mixed delivery mode so that it is normalised as a mode of teaching delivery.

Secondly, one of the challenges we face is that for us, and no doubt many of you, this mode of teaching is still relatively new, and our own assumptions may also have been shaped by the way in which the online format was a response to the adversity created by the pandemic. Moving forward, we need to work collaboratively with our learners to develop the best strategies to maximise the potential of online teaching and assessment. As noted by Pownall et al. (2022), we must recognise that students may need time to '(re)acclimatise' to studying in an online environment. In particular, we need to ensure that online assessment is accessible and inclusive. As we discovered with this group of postgraduate professional students, not all have access to up-to-date technologies or reliable and fast internet connectivity. Nor do they necessarily have quiet and uninterrupted workspaces. Positively embracing a co-learning model with our students, with frequent student-centred evaluations, will create further opportunities to improve our own teaching and assessment practices. This may include a more flexible marking rubric which creates space for students to choose whether they are assessed EITHER teaching online OR in the classroom (Gikandi, 2013). This may help reduce the anxiety associated with summative assessments, particularly for those students for whom being in their home environments rendered them more relaxed.

References

- Burgess, R. G. (1984). *In the field: An introduction to field research*. Unwin Hyman.
- Chauhan, S. (2017). A meta-analysis of the impact of technology on learning effectiveness of elementary students. *Computers & Education, 105*, 14–30. <https://doi.org/10.1016/j.compedu.2016.11.005>
- Clegg, S., Tan, J., & Saiedi, S. (2002). Reflecting or acting? Reflective practice and continuing professional development in higher education. *Reflective Practice, 3*(1), 131–146.
- Devlin, M., & Samarawickrema, G. (2010). The criteria of effective teaching in a changing higher education context. *Higher Education Research & Development, 29*(1), 111–124.
- Ferdig, R., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (Eds.). (2020). *Teaching, technology, and teacher education during the*

- COVID-19 pandemic: Stories from the field*. Association for the Advancement of Computing in Education (AACE). <https://www.learntechlib.org/p/216903/>
- General Medical Council. (2020). *Good medical practice: Working with doctors, working for patients*. Manchester: General Medical Council. Retrieved February 8, 2021, from <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice>
- Gikandi, J. (2013). Synergy between authentic assessment activities and learner autonomy: How does this stimulate shared authenticity in online higher education? *International Journal on E-Learning*, 12(4), 353–381.
- JISC. (2020). The future of assessment: Five principles, five targets for 2025. JISC. Retrieved April 5, 2021, from <https://www.jisc.ac.uk/reports/the-future-of-assessment>
- King, H. (2019). Continuing professional development: what do award-winning academics do? *Educational Developments*, 20(2), 1–5.
- Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching*, 46(4), 609–611. <https://doi.org/10.1080/02607476.2020.1755205>
- Murray, C., Heinz, M., Munday, I., Keane, T., Flynn, N., Connolly, P., Hall, T., & MacRuairc, G. (2020). Reconceptualising relatedness in education in 'Distanced' times. *European Journal of Teacher Education*, 1–15. <https://doi.org/10.1080/02619768.2020.1806820>
- Neuwirth, L. S., Jović, S., & Mukherji, B. (2021). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156. <https://doi.org/10.1177/1477971420947738>
- Ogbonnaya, U. I., Awoniyi, F. C., & Matabane, M. E. (2020). Move to online learning during COVID-19 Lockdown: Pre-service teachers' experiences in Ghana. *International Journal of Learning, Teaching and Educational Research*, 19(10), 286–303.
- Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education (IJonSE)*, 3(2), 70–85. <https://doi.org/10.46328/ijonse.32>
- Pownall, M., Harris, R., & Blundell-Birtill, P. (2022). Supporting students during the transition to university in COVID-19: Five key considerations and recommendations for educators. *Psychology Learning Today*, 21(1), 3–18. <https://doi.org/10.1177/14757257211032486>
- Quezada, R. L., Talbot, C., & Quezada-Parker, K. B. (2020). From bricks and mortar to remote teaching: A teacher education program's response to

- COVID-19. *Journal of Education for Teaching*, 46(4), 472–483. <https://doi.org/10.1080/02607476.2020.1801330>
- Silverman, D. (2013). *Doing qualitative research: A practical handbook* (4th ed.). Sage.
- Sotiriadou, P., Logan, D., Daly, A., & Guest, R. (2020). The role of authentic assessment to preserve academic integrity and promote skill development and employability. *Studies in Higher Education*, 45(11), 2132–2148.
- Sweeney, J. F. (1986). Nurse education: Learner centred or teacher-centred? *Nurse Education Today*, 6(6), 257–262.
- Turner, R., & Spowart, L. (2022). Reflective practice as a threshold concept in the development of pedagogical content knowledge. In H. King (Ed.), *Developing Teacher Expertise for Teaching in Higher Education*, 129–141. SEDA/Routledge.



39

Virtual Case Studies for Assessment Preparation and Practice

Terry Filer and Lesley Davies

Introduction

‘Using virtual worlds to simulate real-world audit procedures’ (Buckless, 2014) was embraced by accounting educators at Swansea University, where both undergraduate and postgraduate students immersed themselves in auditing exercises through the use of virtual reality (VR) for a number of years. ‘The ability to immerse oneself in an exercise can lead to a deeper learning experience’ (Martin-Gutierrez et al., 2017) which can improve student’s ability to recall information more easily when needed for assessment purposes or in the students working environment after graduation (Ryan & Poole, 2019). Furthermore, being able to visualise an auditing case study makes learning a more relevant and realistic experience enabling the students to relate to the learning and material being taught, adding value to audit education through ‘living cases’ (Drake, 2011).

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Educators have found that taking an experiential approach can enhance student learning (Butler, 2019); this is particularly true for auditing students who may be called upon to experience a similar scenario in the real world.

Before lockdown, students accessed the VR inventory exercise via a VR app loaded on their own mobile phone devices and viewed using a VR cardboard headset in a face to face seminar session. In subsequent years, cardboard headsets were replaced with Oculus Go headsets, where the inventory app could be preloaded and ready for use. Oculus Go headsets are more comfortable for students as they are adjustable resulting in less students experiencing motion sickness (Ha, 2020).

Student feedback received from VR exercises carried out before the Covid-19 pandemic were positive as per the results in Figs. 39.1 and 39.2. The figures summarise student responses in two separate Qualtrics questionnaires provided by the lecturer via a URL link to each cohort before the VR exercise commenced and following their online VR experience in class. A follow-up request was sent by announcement on the university’s VLE a week later. Cohort size consisted of 137 undergraduate

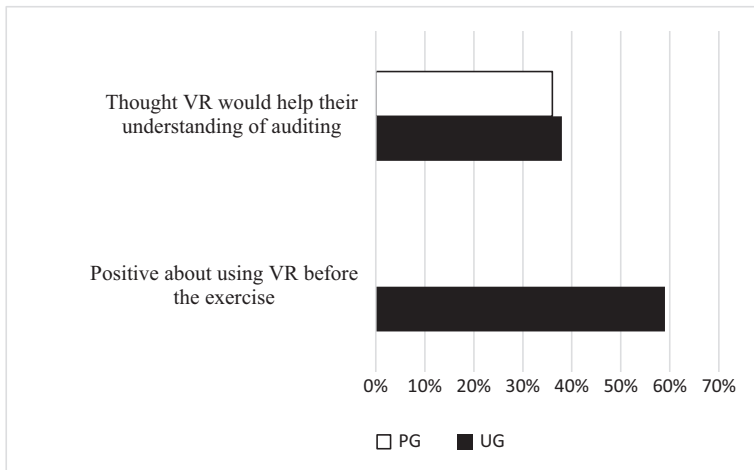


Fig. 39.1 Student perceptions of using VR in their auditing studies—pre-VR experience feedback

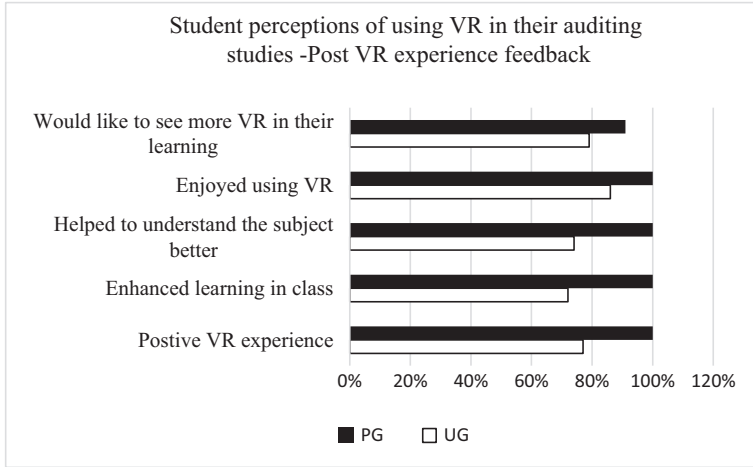


Fig. 39.2 Student perceptions of using VR in their auditing studies—post-VR experience feedback

students (UG) and 12 postgraduate students (PG). Response rate for UG is 55% and 100% for PG.

Student comments on the use of VR for learning were very positive where they commented that they found the exercise an excellent learning tool. Students also found the experience practical and enjoyable, a fun and innovative way to learn, providing an opportunity to get close to a business to confirm in one example that of warehouse inventories. Furthermore, students found the simulation helpful giving them a better understanding of the real work of an auditor. Many students preferred this approach as they gained an experience of auditing rather than learning through terminologies and written text.

Effect of Lockdown on VR-based Teaching at Swansea University

In response to the Covid-19 pandemic, the UK government implemented a countrywide lockdown on 23 March 2020. As a result, it was not possible to use VR headsets from the university as both students and

instructors were now home based (Paudel, 2021). Since 2018, students at Swansea University enjoyed studying both taxation and auditing subjects through VR case studies that were viewed using specialised VR headsets in seminar groups of around 30 students. This learning environment was ideal as students worked in pairs or small groups where one student viewed the case study through VR while another student recorded the details required to answer the case study exercise. Once the information had been gathered and issues discussed the lecturer completed the learning objectives with a group discussion asking students for feedback on how the issues they found could affect the audit or taxation computation.

With the intention of continuing to provide a close to normal learning experience for all students enrolled on the module (Neuwirth et al., 2020) (Crawford et al., 2020), the instructors decided to provide an alternative to the VR experience using video case studies that students could view on their own devices (laptop, PC, tablet or smart phone) either as a flat screen video or via a VR headset (if available). Timing was key as lockdown occurred just before the advanced audit master's module was due to be taught in April 2020. Another important timing factor was that the module was taught as a block delivery so was delivered in its entirety over a four week period. This clearly was a timing challenge as an alternative to the VR experience had to be completed in this short time scale.

An alternative approach was needed as the option of procuring cardboard virtual reality headsets and arranging delivery to students across the globe would be too expensive and time consuming, leaving insufficient time before the module started. Hence, the alternative to VR headsets needed to be a purely online experience.

Secondly, also for timing purposes the instructors decided to focus on a 360-degree video utilised for assessment preparation rather than for learning the auditing topic for the first time. Revision is delivered at the end of the module when the students are preparing for their examinations and hence the final opportunity to introduce a VR alternative.

The Study

The main aim of this study was to evaluate if VR can be successfully adapted for online teaching to provide Swansea University students with the opportunity to engage with innovative thought provoking pedagogy providing a different approach to learning during lockdown.

Research questions are:

1. Are online VR case studies useful pedagogic interventions and can they be used again in the future when the coronavirus restrictions are removed and face to face teaching resumes?
2. Do the online VR case studies provide a positive learning experience for both PG and UG students?
3. Is there scope to extend the VR case studies within the current module and potentially to other accounting modules?

This study answered the research questions by evaluating student feedback through the use of anonymous Qualtrics questionnaires that explained the study to students, gathered data, compared the results and were used to plan future learning and teaching activities based on the outcomes. Educators considered that qualitative data analysis using Qualtrics was a suitable research methodological approach for the study as the primary aim of qualitative research was to gain an understanding of an event through direct student experiences. As this approach captured unique viewpoints from the participants' individual experiences it provided a richer and deeper understanding (Castleberry & Nolen, 2018).

Using a Qualtrics questionnaire ensured student anonymity and was a convenient and economical way to collect a range of data through carefully worded questions from geographically diverse student cohorts (Allery, 2016). Students accessed the questionnaire through a URL link where they were provided with an introduction into the study and an explanation on the confidentiality and anonymity of their answers. This was followed by a range of questions relating to their use of the video case studies for learning together with demographic, gender and geographical location questions. Question design used open, closed, free text, multiple choice, multiple answer, semantic scales and Likert scale survey

questions. Furthermore, Qualtrics allowed easy analysis of the data collected through an export into Excel where data could be presented using suitable graphs and charts.

Methodology—Post Graduate Exercise

360-degree photographs previously taken from a medium-sized family boiler manufacturing business, a natural resources group of companies with a working gold mine and local photographs from Wales, UK, of local homes and working businesses were used to set the three assessment exercises. Each exercise tested students' auditing knowledge looking at particular business risks and the ethical considerations of accepting and retaining an audit client.

The videos were created to develop learning activities that provided students with the practical experience necessary to become active learners in auditing (Chiang et al., 2021) to simulate a variety of different scenarios covering areas from inventory to business and ethical risk. Using 3-D virtual worlds as a platform for an experiential case study in auditing (Moscato & Boekman, 2010) enhances understanding and develops students ability to use judgement and reflection to process and define information required.

The videos led students on a simulated journey that required them to use knowledge they had learnt and to apply that knowledge in a real scenario (Aquila et al., 2019). The case study questions that followed required students to identify and explain business risks, material misstatements and audit procedures within a number of companies. This formative assessment approach supported learning as students were required to use their judgement in response to the auditing issues presented.

The three case studies were split into six areas, with each area being a visual projection with a short summary containing information relevant to the projection. Students were tasked with reading the information given, whilst studying the visual and using their judgement and understanding relating this scenario to the given questions in the case study.

Each visual was talked through, discussing the information given, with students being encouraged to relate the information to the financial statements being produced and the possible business risks being encountered by the company. Accounting knowledge and the fundamental understanding of accounting rules and regulations were also tested within the case study, covering areas such as revenue recognition, provisions and accruals, exchange rates, the valuation of raw materials together with professional ethics and client behaviour.

Students used the videos to identify and explain material misstatements within the financial statements. This is a key aspect within the advanced level audit examination where the videos provided additional support in this field of learning. Students were required to relate their accounting and auditing knowledge to the company and to consider their risk analysis for the audit plan, audit procedures and audit opinion (Terblanche, 2020). This encouraged the students to visualise which areas, at the planning stage of the audit, would be of a higher risk, using the audit risk components of inherent control and detection. Procedures were then discussed in detail and students were able to understand and comprehend the level of risk involved and plan necessary audit procedures.

Using this platform, educators were able to look at a variety of different questions throughout the taught and revision sessions, using the virtual background as a basis for students to be able to visualise the issue (Kolari & Savander-Ranne, 2004; Moscato & Boekman, 2010). This proved particularly helpful for students who did not have a concept of an area other than academia, proving both beneficial and an alternative, interesting concept to learning.

An overview of the content for each case study video can be found below.

Case Study 1—Business Risks

Business and accounting risks, for example, valuation of the factory, loss of key personnel, customer issues affecting storage, warranty provisions and foreign currency exchange risks.

Case Study 2—Auditing Group Companies

Business continuity risks, auditing risks of an overseas subsidiary, paying bribes to overseas administrations, testing the auditor's impartiality and going concern issues.

Case Study 3—Various Auditing Issues

Various auditing issues connected with a company director buying a house from the company, accounting treatment concerning capitalisation of costs and business interruption from fire.

Each case study comprised approximately five to six separate 360-degree photographs that were annotated with appropriate text to test students' knowledge of business risks.

Case study 1 provided students with 360-degree photos annotated with text that required trainee auditors to demonstrate their awareness of audit procedures. One of the photos presented a gas power station under construction where the annotation stated that the company is seeking further finance due to an increase in the construction costs. Students were expected to comment on checking for any going concern issues and the necessary audit procedures required to check the valuation of assets under construction.

Case study 2 presented a 360-degree photograph of an overseas parliament with the annotation commenting on an alleged bribe paid by the company to a member of parliament. This auditing issue required students to demonstrate their awareness of ethical issues and how these could affect the auditor's opinion on the year-end financial statements.

Case study 3 presented a 360-degree photo of an opencast mine where the annotated text stated that the case study company 'Gold Store Ltd' had been granted a licence to mine using opencast methods. Students in their role as auditor were required to correctly identify the business risk and comment on the auditing procedures required to ensure the audited financial statements presented a true and fair view. The educators would be looking for student responses to comment on evaluating if the company management have included adequate provisions in the financial

statements for environmental and business interruption should there be any local opposition to the opencast site or restoration and clearing up costs.

Technical Aspects

Each scenario consists of a number of photographs that were stitched together using proprietary software provided with the 360-degree camera that was purchased previously for around £100. Each video produced was of a fairly short duration of around 1 minute or less, for ease of use they played continuously. Students controlled the playing speed using a pause button in the mp4 video to stop and look around each scene.

Videos were played as a flat mp4 video or as a 360-degree VR video if students had access to a VR headset. Using a VR headset provides the best experience as students are able to immerse themselves in the scenario as if they were actually there.

During lockdown most learning was presented online where students themselves were in control of the learning environment rather than the instructor. How students utilised this additional control and the effectiveness of online learning compared with in-person learning is subject to further research. One of the main purposes of providing innovative teaching by using 360-degree videos was to support, captivate and improve student learning (Walder, 2017) by providing a variety of learning resources to maintain students' interest in their learning.

Preparing the case study videos did not require technical knowledge of VR or coding as the videos were prepared from 360-degree photos previously captured by the educator. Content of the case studies was adapted to the module content based on the images available and presented to students in a typical exam standard question format. Students prepared for the video case studies by reviewing the material already presented via the university's VLE.

Through the camera software, selected photographs were formatted by adding text, deciding the duration of each photo, adding music (if required) and then publishing the video to produce an mp4 video or via YouTube. Both mediums allowed VR viewing via the student's mobile

phone using appropriate headsets, if available. Cardboard VR headsets are relatively inexpensive and can usually be purchased for less than £5 each. However, as previously explained during online learning the learning environment is under the student's control so the decision to use VR headsets was their personal choice. For this reason, students were not encouraged to use VR headsets on the basis of time and cost (Cooper, 2019).

When completed, the MP4 videos were added to the university's virtual learning environment (VLE) for students to access before and during the seminar session when delivered by the educator and for viewing in their own study time as a revision resource. Some international students were unable to access YouTube in their home countries so the mp4 files were added directly to the VLE. Alternatively, where file size is an issue then a link can be added to the VLE for easy access to another online location.

Producing the three video case studies took around 1–2 hours each which was all production time. Compiling the case studies themselves took longer, the cases used here were based on previous exam resources where the question and solution had already been prepared and adapted to suit the businesses demonstrated in the 360-degree photographs.

Using a 360-degree camera is helpful but not essential as many smart phones have the ability to take quality 360-degree photographs and are readily available when good photographic opportunities arise.

Undergraduate Case Studies

Due to the successful implementation of video case studies for master's studies, a similar video exercise based on the inventory of a go-kart business was prepared for undergraduate students in March 2021. Students were presented with the case study during their online seminar session, where they put themselves in the position of the auditor with the 360-degree video representing a client visit to the go-kart business. Students were required to identify and respond to issues arising during the visit that could affect the year-end audit of inventory.

Similar to the PG exercise the video was kept short, less than one minute, and contained explanative texts to present the inventory issues

arising. The UG VR case study presented an indoor racetrack business that hired go-karts for customer use on an indoor racing circuit. The business also sold merchandise and had a customer café. When playing the video students could hear F1 racing car music in the background.

Students were required to evaluate learning aspects relating to:

- Differentiating between go-karts for sale to those held for customer rental purposes.
- Power bars sold at reception that had exceeded their best before date.
- Café having cash only sales and high staff turnover.
- Company manufacturing go-karts and having a number of units in production as work in progress.
- Damaged protective overalls that were sold to customers.

During the exercise students commented that although many had visited go-kart centres before, they had never thought of the auditing or business implications that could arise. This made the exercise more relevant and enjoyable and encouraged students to use their critical evaluation skills, a generic skill that accounting degree students are expected to have acquired (QAA, 2019).

After the 360-degree video presentation had been played the instructor asked students to share their views on what they had seen and discussed the auditing implications. Many students found this approach a viable alternative to VR and commented that it was helpful in their learning (Ulrich et al., 2019).

Results

To capture student feedback on the effectiveness of the VR video learning resources both PG and UG students were requested to complete a questionnaire after the seminar delivery took place. PG response rate was 20% (cohort of 25) and 11% for UG students (cohort of 132). Student responses from the questionnaire are summarised in Figs. 39.3, 39.4 and 39.5.

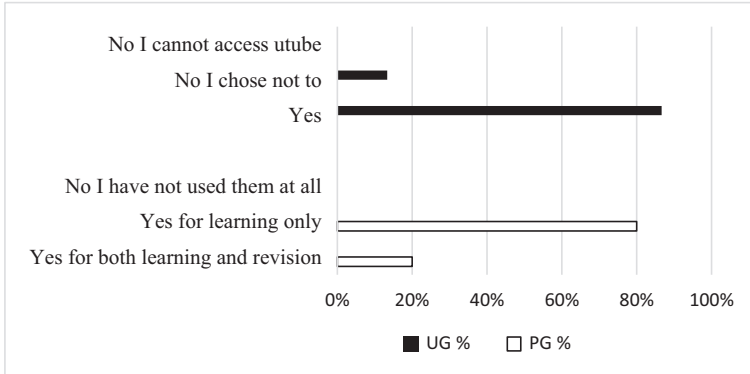


Fig. 39.3 Have you accessed the VR case studies during your learning?

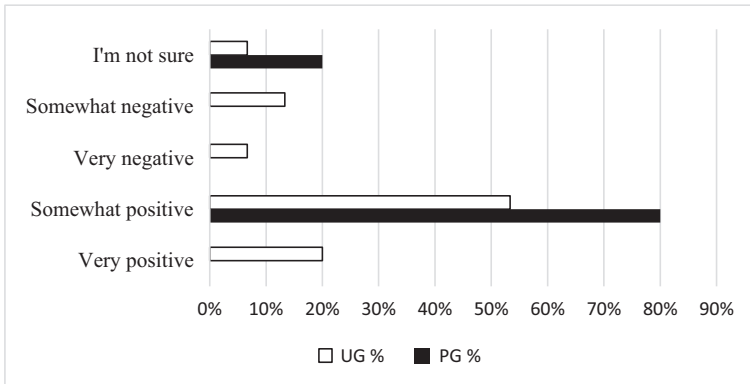


Fig. 39.4 Which of the comments below best describes your thoughts about using the 360-degree case studies?

As demonstrated in Figs. 39.3, 39.4 and 39.5, 100% of responding PG students accessed the video case studies compared with 87% of UG students. None of the UG students experienced issues with accessing YouTube.

A total of 80% of PG students were positive about using the video case studies and just 20% unsure, compared with 73% of UG students who commented that they were either very positive (20%) or somewhat positive. In total 20% of UG students (three students) were either very

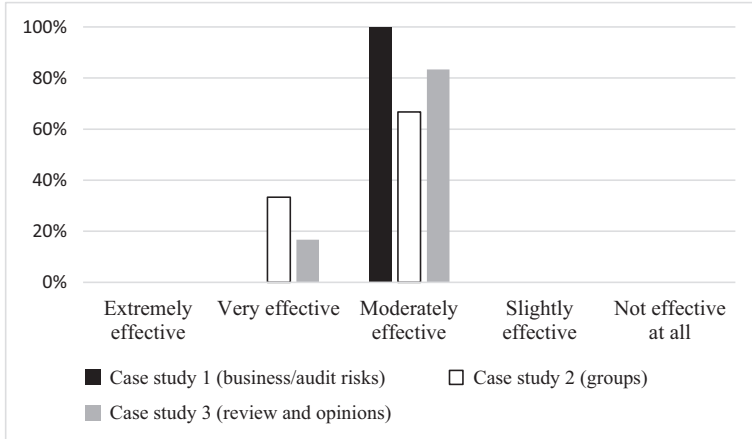


Fig. 39.5 Effectiveness of the video case studies

negative or somewhat negative about using the case studies with one student (7%) not sure as demonstrated in Fig. 39.4.

Results on the VR case studies effectiveness are summarised in Fig. 39.5.

Conclusions we can draw from the results are that PG students found the video case studies more enjoyable and helpful for their auditing learning than the UG students (see Fig. 39.5). Although 10% of UG students responded that they thought they would better remember and recall auditing concepts and rules from the case studies compared with none of the PG students. Generally, students had mixed views on their effectiveness as none of the students had been assessed on the topic areas studied before they participated in the survey.

Figures 39.6, 39.7 and 39.8 capture students' views on the effectiveness of the VR videos as a learning tool.

Only PG students were asked to respond to the effectiveness of the three video case studies as demonstrated in Fig. 39.6 as they received three separate business risks orientated video case studies whereas the UG students had access to one inventory video case study. As demonstrated in Fig. 39.6 students found the second case study on groups the most effective followed by case study 3 (review and opinions) and finally case study 1 (business and audit risks). It was encouraging to find students'

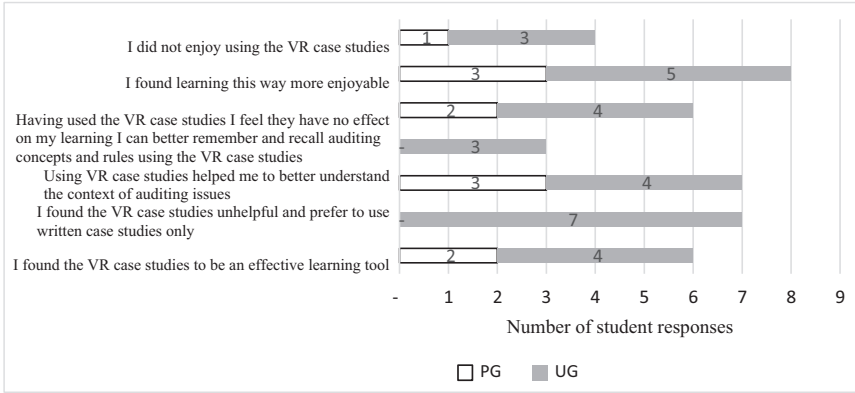


Fig. 39.6 Student feedback on each of the three case studies provided on the VLE

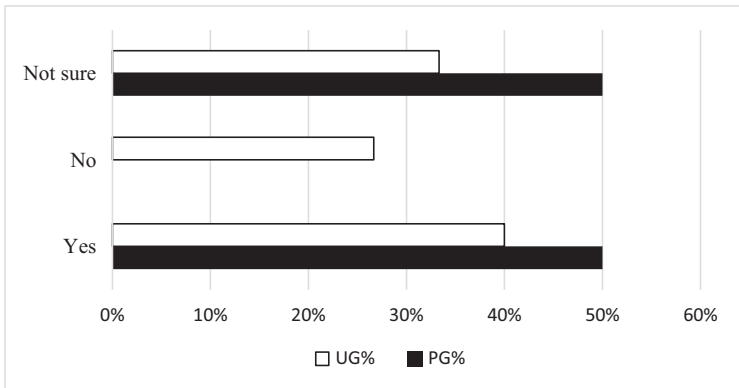


Fig. 39.7 Would you like to see more VR case studies in your auditing studies?

feedback indicated that they found all the case studies effective to some degree either moderately or very effectively.

When asked if students would like to see more use of video case studies in their auditing studies we find that a greater number of PG students agreed with this comment (50%) compared with UG students (40%) (see Fig. 39.7). Furthermore, when students were asked if more video case studies are provided the majority of PG students would prefer them

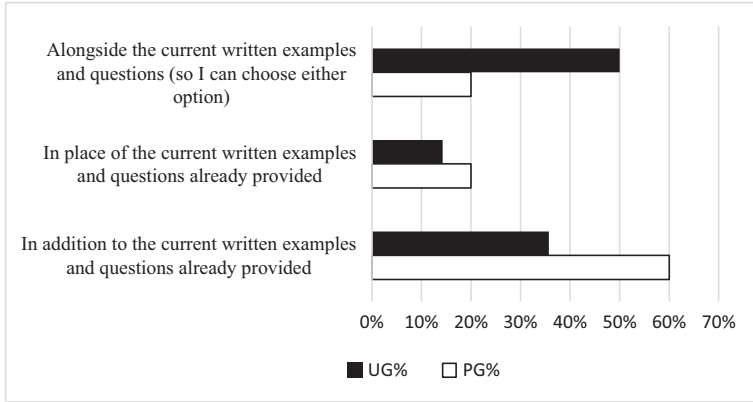


Fig. 39.8 If more VR case studies are provided would you prefer these to be...

to be in addition to the current written examples and questions whereas the UG students would prefer the video case studies to be available alongside the current materials so they can choose either option (see Fig. 39.8).

In response to the question if the effectiveness of the video case studies could be improved with a virtual reality headset, we find that 100% of the PG students agreed to that statement compared with 65% of UG students, where 29% (4 students) were not sure and 7% (1 student) disagreed as shown in Fig. 39.9.

A similar response was observed when students were asked if they would like to use more video case studies in their other subjects where 80% of PG students agreed compared with 28% of UG students. There were 20% undecided PG students and 43% UG students. A total of 28% of UG students either probably or definitely did not wish to see more use of the video case studies as shown in Fig. 39.10.

When asked which subjects did students feel would most benefit from video case studies PG students thought that all subjects except for financial accounting would benefit whereas UG students thought all their accounting modules to some extent particularly management accounting and taxation would benefit the most as shown in Fig. 39.11.

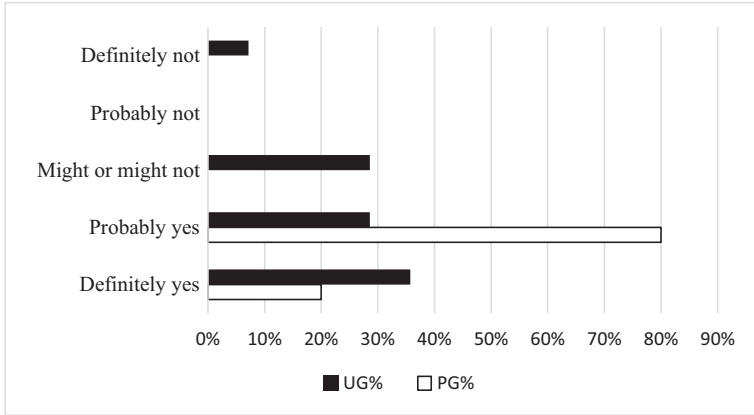


Fig. 39.9 Would the effectiveness of the VR case studies improve if you could view using a virtual reality (VR) headset?

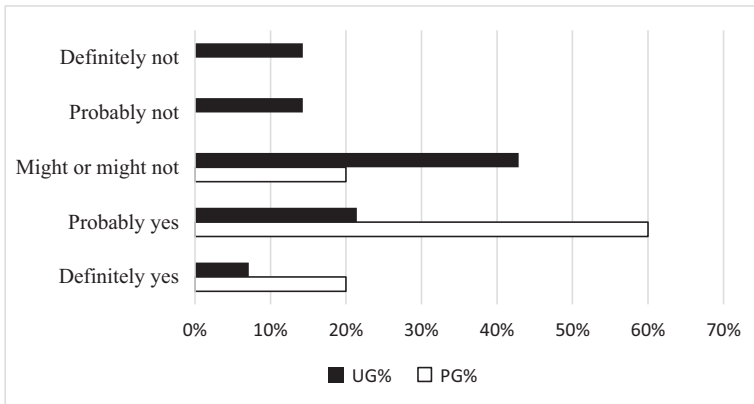


Fig. 39.10 Would you like to see more use of VR case studies in your other accounting/finance subjects?

Key Learning

The key learning gained through this study is that providing innovative and diverse methods of learning is vital for online learning to be a success. This is because online learning can be monotonous where students who

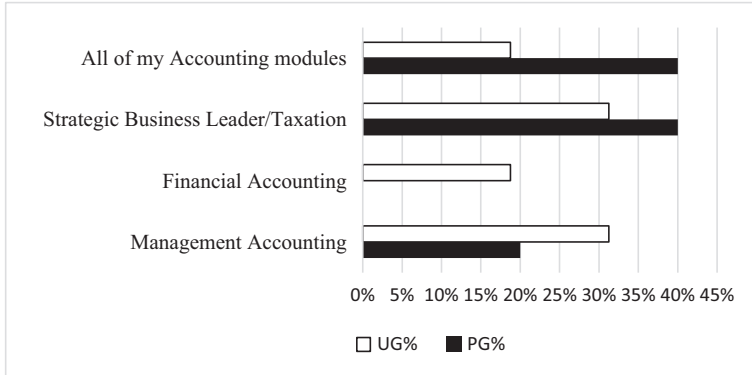


Fig. 39.11 Which subjects do you feel would benefit from VR case studies?

have problems with self-discipline become overwhelmed having to listen to many hours of recorded videos.

Many students prefer to learn by first-hand experience ‘by doing’ rather than listening, hence this approach provided the opportunity for students to experience learning in a simulated case study approach. Students really appreciate the educator’s efforts to bring something new to their accounting learning and being provided with the opportunity to apply their knowledge in a real-world scenario. Indeed many of the students were surprised how their auditing knowledge could be applied to a gold mine or a go-karting business with many commenting that they could never look on these businesses in the same way again.

In the post-Covid world, the VR exercises already prepared can be used again perhaps alongside a face to face VR session either as an additional resource or for students who are unable to attend the in person session. Another important learning aspect for the educators is that despite lockdown innovation can continue and ideas shared to improve auditing and accounting pedagogy. Furthermore, the auditing educators have the experience and evidence to share their knowledge with colleagues with the aim of extending the use of VR to other accounting modules.

Conclusion

The main aim of this study was to evaluate if VR can be successfully adopted for online teaching and to answer the three research questions outlined above:

1. Are online VR case studies useful pedagogic interventions and can they be used again in the future when the coronavirus restrictions are removed and face to face teaching resumes?
2. Do the online VR case studies provide a positive learning experience for both PG and UG students?
3. Is there scope to extend the VR case studies within the current module and potentially to other accounting modules?

In response to the first research question, we can conclude from the questionnaire responses in Fig. 39.4 that the majority of students had a positive VR experience, found the VR case studies enhanced their learning in class and helped them to better understand auditing as shown in Fig. 39.5. This response provided a reassurance that the educators were seeking to continue using VR case studies in the future alongside in person VR case studies, as supported by the results in Fig. 39.9. Furthermore, all the case studies used in this study have been successfully reused in semester 2 of 2020/2021 academic year.

Although it appears that PG students are more positive about the use of the VR case studies, the majority of UG students would like to see more use of them in other subjects as demonstrated in Fig. 39.10. Therefore, we can conclude that the online VR case studies are appropriate for both PG and UG, although the content of the videos should be differentiated in line with the appropriate learning outcomes for each level of study. In this case UG was at level 6 and level 7 for PG.

In response to research question 3, we can conclude that there is scope to extend VR case studies both within the current modules and potentially to other accounting modules from the positive student responses in Figs. 39.10 and 39.11.

The value of this study is to highlight how innovative pedagogy can be introduced successfully in higher education settings to various types of

students. Adapting the pedagogy to an online delivery was relatively straight forward and provided a different perspective to learning auditing and other accounting subjects.

References

- Allery, L. A. (2016). How To...Design and use questionnaires for research in medical education. *Education for Primary Care*, 27(3), 234–238. <https://doi.org/10.1080/14739879.2016.1175914>
- Aquila, J. M., Wang, D., & Mattia, A. (2019). Are instructor generated YouTube videos effective in accounting classes? A study of student performance, engagement, motivation, and perception. *Journal of Accounting Education*, 47, 63–74. <https://doi.org/10.1016/j.jaccedu.2019.02.002>
- Buckless, F. K. (2014). Using virtual worlds to simulate real-world audit procedures. *Issues in Accounting Education*, 29(3), 389–417. <https://doi.org/10.2308/iace-50785>
- Butler, M. C. (2019). Do, reflect, think, apply: Experiential education in accounting. *Journal of Accounting Education*, 48, 12–21. <https://doi.org/10.1016/j.jaccedu.2019.05.001>
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807–815. <https://doi.org/10.1016/j.cptl.2018.03.019>
- Chiang, C., Wells, P. K., & Xu, G. (2021). How does experiential learning encourage active learning in auditing education? *Journal of Accounting Education*, 54. <https://doi.org/10.1016/j.jaccedu.2020.100713>
- Cooper, G. P. (2019). Using virtual reality in the classroom: Preservice teachers' perceptions of its use as a teaching and learning tool. *Educational Media International*, 56(1), 1–13.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 2591–801X. <http://journals.sfu.ca/jalt/index.php/jalt/index>
- Drake, J. (2011). Adding value to audit education through 'living' cases. *Accounting Education*, 20(2), 203–222. <https://doi.org/10.1080/09639284.2011.557518>
- Ha, O. (2020). Development of a low-cost immersive virtual reality solution for STEM classroom instruction: A case in Engineering Statics. *2020 2nd*

- International Workshop on Artificial Intelligence and Education* (pp. 64–68). WAIE 2020.
- Kolari, S., & Savander-Ranne, C. (2004). Visualisation promotes apprehension and comprehension. *International Journal of Engineering Education*, 20(3), 484–493.
- Martin-Gutierrez, J., Mora, C.E., Anorbe-Diaz, B., & Gonzalez-Marrero, A. (2017). Virtual technologies trends in education. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(2), 469–486. <https://doi.org/10.12973/eurasia.2017.00626a>
- Moscato, D. R., & Boekman, D. (2010). Using 3-D virtual worlds as a platform for an experiential case study in information systems auditing. *Communications of the IIMA*, 10, 3.
- Neuwirth, L. S., Jovic, S., & Mukherji, B. R. (2020). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156. <https://doi.org/10.1177/1477971420947738>
- Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after. *International Journal on Studies in Education*, 3(2), 70–85.
- QAA. (2019). *Subject benchmark statements: Accounting*. The Quality Assurance Agency for UK Higher Education (QAA).
- Ryan, E., & Poole, C. (2019). Impact of virtual learning environment on students' satisfaction, engagement, recall and retention. *Journal of Medical Imaging and Radiation Sciences*, 50(3), 408–415.
- Terblanche. (2020). Factors to consider for effective critical thinking development in auditing students. *South African Journal of Accounting Research*, 34(2), 96–114. <https://doi.org/10.1080/10291954.2019.1669293>
- Ulrich, F., Helms, N., Frandsen, U., & Rafn, A. (2019). Learning effectiveness of 360° video: Experiences from a controlled experiment in healthcare education. *Interactive Learning Environments*, 29(1), 98–111.
- Walder, A. (2017). Pedagogical innovation in Canadian higher education: Professors' perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>

Part V

Supporting Student Learning and Wellness in Lockdown



40

Decision-making under Uncertainty: How University Students Navigate the Academic Implications of the COVID-19 Pandemic Challenges

Sterling Rauseo, Diluk Rathnayake,
and Raluca Marinciu

Introduction

COVID-19 pandemic has had a tremendous impact on higher education in the United Kingdom, starting in March 2020. Universities had to adapt to the pandemic by adopting a blended approach to teaching and learning initially, later transferring to total online delivery during 2020 and leading up to June 2021 when teaching delivery was expected to return to normal. The case study university is a post-92 UK public university with four faculties, delivering (undergraduate and postgraduate (research and taught courses) courses) to over 15,000 home and international students. The quick and dramatic movement from on-campus to blended online and on-campus and later to total online delivery caused

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major disruption to the university teaching delivery and to students' teaching and campus experience. The uncertainty caused by the disruption and resulting lack of reliable information required for decision-making have brought significant anxiety for students and challenges for the university to respond to the anxiety with effective solutions and intervention. The study explores students' experiences of their decision-making concerns and processes as they make sense of the effects of the pandemic on their university lives and how to respond to these effects with strategies and decisions.

The switch from face to face to online classes caused by the pandemic created several challenges of timetabling and maintaining a campus experience via a blended approach. Teaching staff had to quickly learn how to produce an online experience which encouraged students to engage fully in their academic life. For professional services staff, the challenges were making sure students' wellbeing, financial and employability needs were being addressed. For several students, the crisis revealed several online delivery impacts including digital poverty and accessibility to laptops and internet facilities at home, and changes in courses design and questions about the quality of the online offering (Sahu, 2020). With time on their hands and loss of employment, students and in many cases their parents, concerns around employment became paramount. This was particularly the case for third-year students having to adapt to the changing job market. Even with virtual internships and focused employability events, they were still faced with the future prospect of transitioning from a virtual environment to a traditional workplace, now with the benefit of newly learnt and developed virtual skills for a new blended work environment (Binnie, 2020).

University life and experience for young people are very much about creating community and connections with their peers and staff. The shift away from on-campus delivery also presented a dilemma for students. Students faced questions as to whether they started their university life or they interrupted their studies (Tan, 2020). When considering the needs of students at different levels it is essential to understand the different factors that influence students' decision-making and motivations when they are in their first years of study, compared to when they are final year students (Tett et al., 2017). The first-year experience is well documented

as being crucial to student retention and setting the student on a successful path in their university studies and is often perceived as ‘complex and chaotic’ (Meehan & Howells, 2018). Second-year students’ challenges are focused on fitting in to the university environment, using their familiarity with the system to increase their performance in the academic subjects. With third-year students, who have developed an acquaintance with university systems, feelings are now about being a part of the community and finding reliable institutional communications (Tett et al., 2017). Their focus is life beyond university, including employment opportunities and pursuing postgraduate education.

When faced with decision-making under uncertainty, as with the COVID-19 pandemic, students seek different sources of information related to the particular issues for which they require solutions (Moogan, 2020). The importance of academic and professional services support has therefore heightened, as students seek information that support their academic studies, such as mental health counselling, information on hardship funds and bursaries, as well as COVID-19 guidelines of the local authorities. On the other hand, the non-university sources of information like parents, friends and social media have also played an important role for students as they respond to the uncertainty caused by COVID-19.

The Study

Focus groups were conducted in the Business Faculty during the academic year 2020/2021. The aim of the pilot project was to survey students on their decision-making in light of the uncertainty produced by the COVID-19 pandemic and the impact of it on their university education. The focus groups involved students from each of the three undergraduate years.

Methodology

Two focus groups were conducted with undergraduate students, one for first- and second-year students and one for third-year students. Each

focus group lasted 90 minutes and took place between February and March 2021. The study had 15 participants, equally drawn from both genders, in the 19–24 age group and a mix of international and home students. All focus groups were conducted online via Microsoft Teams. Students were recruited through announcements made via the business school employability office and using the personal tutoring communication channel. Ethics approval for the details of project was provided by the university ethics committee. All participants were apprised of the confidentiality of their opinions and identities and the associated participant sheet and consent form were distributed. All recordings and transcripts generated were stored according to the strict data storage requirement of the university and in accordance with GDPR regulations. The responses were analysed using a thematic analytic approach with the theoretical framework of perceived environment uncertainty (PEU) as the foundation.

For each focus group the goal was to identify two types of information flows. Two kinds of visual data were developed from student focus groups interviews. First, decision-making process maps identify the information flow of students in decision-making, which helps them respond to and develop strategies to progress through their university time in the face of the uncertainty created by the COVID-19 pandemic and its outcomes. Second, information and/or social network diagrams identify and map sources, and types of information and networks, used by students to navigate the decision-making process. Both will assist staff in understanding how they may support students in getting the information and in developing strategies to address the ‘perceived environment uncertainty’ (PEU) related to decision-making (Milliken, 1987). PEU breaks down uncertainty into three elements in order to understand the nature of the uncertainty, the effect of it and responses in terms of decision-making and strategies.

Findings and Analysis

First, we present the underlying framework we used to capture the decision-making process and sources of information which participants outlined in their responses. In the subsequent sections, we present the

themes of sources of concerns, grouped by the undergraduate year of students. Next, from our findings and analysis, we outline a summary of future strategy considerations for HE-staff who are involved in helping students navigate COVID-19 and uncertainty producing events that may arise in future. Finally, we highlight summary points from our study.

Decision-making Process Map

Students identified the types of problems they face, the available choices and information sources used to address these choices to achieve the outcome of the problem. The problems for each group were different and these will be outlined in the following sections.

The decision-making process was adapted from the rationale model of decision-making (Heracleous, 1994). The assumptions made to adapt the model to this study are that students understand the issue/issues they are facing, available alternatives and understand how to gather and evaluate the information needed to reach the optimum solution (Heracleous, 1994). The adapted decision-making process is displayed in Fig. 40.1.

Information and Social Network Diagram

Ideas derived from McFaul (2016) were used to track the sources and paths of information students used in the decision-making process as outlined previously. For each problem students were asked where they sourced their information to solve these problems and why? The research also looks at the directional flow of the information between the sources.

Overlaying the decision-making process map is the social network diagram: social network diagram visualises a sequence of interrelated,

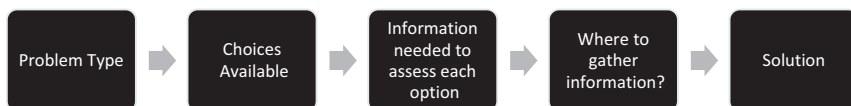


Fig. 40.1 Decision-making process map showing directional informational enquiry flow of students

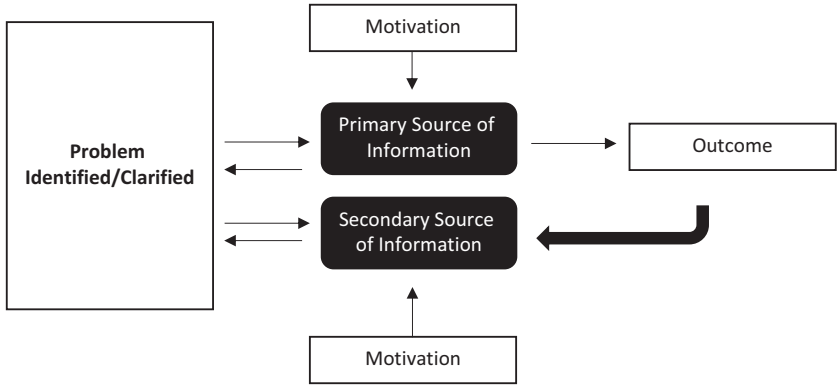


Fig. 40.2 Information and social network diagram showing the sources of information and directional flow used by students

complex activities that are a part of the decision-making system (McFaul, 2016). The information and social network diagram is displayed in Fig. 40.2.

First- and Second-year Undergraduate Focus Groups

In exploring the decision-making of first- and second-year students, three main themes emerged in terms of the problems and issues which they needed to address. The themes were as follows: continuation of studies, type of learning environment, part-time work to develop transferable skills or financial support, student life, and support network. The summary table showing the details of the decision-making process map is shown in Appendix 1.

Continuation of Studies

With this theme the student's concerns were in light of the COVID-19 pandemic, whether they should continue with their university study or interrupt/withdraw due to the impact on the higher education sector. On

the whole, the students were quite clear that they would continue their studies, 'Well, you know, I was 100 percent sure that I have to be like I have to continue my studies. ... I would say because I had the opportunity to study online'.

For some the reasons for continuing were that there was a lack of job opportunities in the market, and online delivery was perceived as a suitable time and environment to focus on studies. For others, it was that they were motivated and determined they had chosen the right subject which would open doors in the industry upon completion. One opposing view was that the university experience has decreased in quality and was unable to offer the full potential of higher education. Some participants considered interrupting their studies, however due to university regulations this was not an option.

In order to give full consideration to these options students sought different types of information from different sources. The types of information can be categorised as either university information or personal environment. In terms of university information, one type of information focused on what was to be the learning environment whether blended or fully online, and the support available to them from the university. Another type of information was the level of support that was available if they continued with their studies. In terms of personal environment, the issues were around financial support, either from family or furlough arrangements if they were employed in part-time work.

The sources which provided the information, range from university-specific ones such as programme teams and personal tutors, to support networks which included family and friends. Students' choices of the sources were motivated by the availability of resources and the closeness of the existing relationship that they had. For example, students tended to first approach family members and friends for advice, before they approached university sources.

Types of Learning Environment

The choice between online or blended learning was another major issue that emerged from the focus groups. On the one hand, with pure online delivery, students required information such as the flexibility of delivery,

assessment support and the digital tools and accessibility to assess whether this was a good option. For some students, the flexibility of delivery provided a positive benefit which allowed them to study at their own pace. For others, the online learning was challenging in the mode of delivery

I was so frustrated with the quality of the teaching by being pre-recorded and you know how I think there is no there is no way you can compare teaching online with face to face. So, I'm a pretty visual learner. Yeah. And then I came across with, I would say 90 percent of the slides that came across with, um...they are not dyslexic friendly, so I'm dyslexic myself. So that affected me so much. Oh, so pre-recorded lectures, eh? Sounds like they are reading out.

In addition, with online delivery students felt like it lacked engagement and interaction with academic module leaders. In terms of assessment, some students felt the change of delivery from on-campus to online had affected their motivation and would therefore impact negatively on their academic performance 'Yes, online learning has been so bad, has been bad... The whole idea of I guess, motivation, which I imagine for lots of people, that's a big issue...'

They needed to get information on the level of support that was available for a fully online offering. Some concerns related to the online delivery were: the level of IT equipment, internet access, and their level of digital skills. On the other hand, blended learning seemed to be a preferred set-up for most students, as it met some of the gaps that a fully online environment created, such as interaction with tutors, access to library facilities and study spaces. The information needed to understand this option centred around social distancing rules on campus, and concerns particularly from international students on rental arrangements terms and conditions for the on-campus accommodation

I left while the blended learning was still going on and they said that they would only stop the rent thing if the government says that universities need to close. I think they kept like the blended learning thing going for as long as possible.

The university was the main source of information to assess this option. The modes of the delivery of the information varied from official email communications to websites and social media groups, as well as an on-campus student information centre. Furthermore, the information on specific programmes and modules delivery and assessments were communicated in detail by the programme and modules teams. The students also had the option to attend information sessions on the different types of learning environments in order to facilitate their decision-making. The motivation behind student's primary choice of source of information was the reliability and availability of sessions provided by the university. Students preferred to access official university channels such as the website and informational general sessions, before speaking with their personal tutor. The personal tutor and programme team came in as a secondary source of information that could clarify personal circumstances or outstanding questions.

Part-time Work to Develop Transferable Skills or Financial Support

A crucial non-university-related decision centred around part-time work. Students at this level viewed part-time work as a source of acquiring transferable skills needed for their graduation: 'No, I got this job mainly because of gaining more experience, just adapting to the, you know, London...'.

Given the lockdown requirements by the UK government, some students were deprived of the option of having a part-time job. They sought to fill the gap left by seeking information about extra-curricular activities, volunteering in the local area, as well as newly opened virtual internship schemes. Other students who needed part-time work sought out the assistance of employability services in the university in order to help them improve their applications and CV, as well as connecting them with potential vacancies. Meanwhile, others looked to create their own enterprises and took advantage of the Generator, which is the enterprise services in the university, looking at 'side hustles' and freelancing.

For this decision, the employability office and the enterprise office were the main sources of information to students. The offices provided support with industry-specific workshops, one-to-one employability advice, as well as the mentoring scheme with accredited professionals. In addition to that, government websites on job retention and furlough arrangements as well as newspapers were also accessed. The motivation behind students choosing the employability services as their primary source of information was the expertise that the team could provide on current employment climate. However, if students had a very specific industry inquiry that the office could not resolve, they would seek advice and information from specific government industry websites. The UK government sources were also important, given the constantly changing guidance as the COVID-19 pandemic impacted on the economic and social environment.

Student Life and Support Network

An overwhelming theme for students at this level was student life and support network. The twin decisions were how to engage with an online-only community and to supplement this with on-campus but socially distanced activities. With the online-only presence, students required information about the schedule of events that were offered by the Business School which will help them to stay connected to the university community. In addition, students also sought student union options such as joining societies online and engaging with student union activities. In terms of the desire to engage in on-campus activities, students required information about how they could engage in these, given the social distancing rules.

For this option the Business School Employability Office, The Student Union, and programme co-ordinators were sought out to provide information about these opportunities as solutions to students to improve their student life. Programme co-ordinators played a crucial role in communicating key elements of the offerings to students, as they were perceived as a primary source of information. The Student Union with its closeness to student experience was seen as a practical and unbiased source of information for individual students.

Third-year Undergraduate Students

The themes for third-year students range from prospects after graduation, to having part-time work or not, and about learning environments which focus on where students carry out their learning. The summary table showing the details of the decision-making process map is shown in Appendix 2.

Prospects After Graduation

In contrast to the first- and second-year students, third-year students were more focused on their opportunities after they conclude their studies. The main three options emerged were: graduate employment, post-graduate studies and taking a gap year to travel.

Well, I think doing master's or not is a pretty big decision for me because I really wanted to take a gap year and then to continue in another country, you know, work in that gap years to save up money.

In terms of graduate employment, information students sought, revolved around industry-specific prospects, and availability of internships. In the absence of in-person work opportunities, students were seeking virtual internships through platforms such as LinkedIn.

Another strong option that emerged from the discussions were the prospects of future studies. The majority of the students saw this as an opportunity, due to the fact the job market was very uncertain. The dilemma around this option for students was whether to start their further studies immediately, or after a gap year. This choice was influenced by their student background and the support they receive whilst at university. Therefore, the information they sought were centred around future teaching delivery methods, programme entry requirements, and visa restrictions.

A contingency plan for some of the students was to utilise the next year as a gap year in which they could travel and gain personal development experiences. Some students explored available options and potential challenges in travelling, such as visas and COVID-related restrictions.

The main motivation behind selecting these information sources was students' feelings they addressed their concerns directly and comprehensively. These were the ones they looked to even before the pandemic in order to get reliable information. There were similarities in first- and second-year students in how they received this information. They were looking at the same university sources including Business School Employability Office, The Generator Enterprise Team and guest speakers.

To Have Part-time Work or Not?

This decision was even more crucial than the similar one faced by first- and second-year students for a number of reasons. Firstly, the decision-making here was influenced by government/industry restrictions related to the workplace, the need for extra financial support, as well as their motivation to balance both work and final-year studies. Secondly, a surprising finding was the fact that the need for extra income was outweighed by the students' need to perform well in their final year.

Yes. I'm like, I know as well, I kind of made it easier to study so I could focus on, like my assignments on my dissertation without having to think about work in that part-time or full-time.

With this as a priority, the students saw the work restriction as an opportunity to work on their final assignments/dissertation. Thirdly, for those who have been in employment, furlough schemes provided that extra support to maintain their independence.

For those for whom part-time work was essential, the challenge of finding work was increased given the total lockdown. These students turned to the employability services to mitigate this challenge by seeking entrepreneurial opportunities with the Generator, and working on their CV and cover letters for when the work was available for them. The students who were still working were mainly on furlough schemes or in industries unaffected by COVID, such as construction.

As was the case before COVID, the Business School Employability Office and the Generator Enterprise office were the most trusted sources

of information regarding employment and entrepreneurial activities. Now with COVID, UK government and newspapers provided up-to-date information on work conditions, regulations and opportunities.

The Learning Environment

The choices for the learning environment were limited due to UK government restrictions around lockdown. In the first term, students had the opportunity to study on campus as well as in a blended approach. However, in the second term due to a rise in COVID-19 cases, all students were forced to move to a remote learning environment with restricted access to campus.

For the majority of the students, studying online in the comfort of their own environment was a positive outcome. The students mentioned that they had more time and money saved through not having to commute to campus.

I had free time, so I, I do all my work a lot before the due dates. For example, I already have the first draft of my dissertation and I have to submit it after one month. You know, I mean, it's still a draft. Yes. There is still a lot of corrections that I have to do. But in general, yes, I think in a way, as I said, I have a lot of free time. I try to fill it in with something like I do some online courses, some free courses. I used my free time on LinkedIn, LinkedIn, learning to do something more. I am I did one virtual internship.

For some international students this presented an additional benefit in being able to travel to their home country and manage both work and higher education studies. However, the effectiveness of online learning was moderated by a lower level of self-efficacy and availability of digital resources. Some students believed that although they had more time available, they worked better in a university environment. The information needed to make these decisions were focused on module and programme-specific information and changes to timetable and delivery methods.

But if it's about concerning the university, I usually get it from the module teaching team, the programme team, and I receive emails too: How are you doing? What are we doing? How is it going to be different? Why is it different and stuff like that, so didn't feel that much levels of uncertainty.

For third-year students, university communication such as weekly emails and catch-ups with programme tutors were preferred due to the trust built over time. In terms of the restrictive access to campus, students who took advantage of this opportunity sought information on the university social distancing policy and UK government policies on travel on public transport.

Transferrable Strategies and Learning from the Focus Groups

There are four main areas of strategies and learning that HE staff can draw from the results of the focus groups:

- Since the concerns and information needs are different at each undergraduate year (e.g. the need and purpose of work), a more targeted and segmented approach to communications is needed during periods of uncertainty.
- Online delivery and experience by students brought mixed reactions and there may be a need to consider opportunities for a mix of online and/or blended approach going forward.
- When offering an online delivery, consideration should be given to students' IT and home resources needed to make access successful. Additionally, provide personal and life skills coaching to students, for example, on keeping motivated or engaged.
- Rethink the information infrastructure for staff and students so it is a right mixture of being centralised, uses newer media channels like WhatsApp and Tik Tok, and is disseminated and accessible to sources outside the university which students may turn to for advice.

Conclusion

The focus groups revealed interesting insights for academic and professional staff that can assist them not only in the COVID-19 pandemic, which may continue for a prolonged period of time, but also in similar events which create high levels of uncertainty.

We have seen that decision-making under uncertainty reveals similar concerns for students across the three years of undergraduate studies. However, there can be distinctive differences even with similar concerns. The practical implications of this for university academic and professional staff require that there need to be tailored approaches to communication to students at different levels. The communications strategies need to recognise and incorporate the different sources that students turn to for advice, when dealing with situations of uncertainty. The findings from these focus groups revealed that students' motivations for using different sources of information can change over time and this needs to be incorporated in any communication delivery. As students progress through their university journey, their relationship with academic and professional staff becomes stronger and therefore they rely on, and trust the information provided by them.

In delivering online teaching, the university administrators also should consider techniques and methods which build community, which is important in providing support during periods which produce high anxiety for students. An important concern revealed was the support required from university staff to students around various employment concerns. This support is necessary, since work is important in the lives of students both during their university studies and as they prepare to graduate into full-time employment. These insights, no doubt, may be different from university to university and dependant on the country or societal factors, so an initial survey of the decision-making concerns, information sources and the network and flow of information may have to be undertaken for each individual case.

Appendix 1

Summary table of the details of the decision-making process map for first- and second-year undergraduate focus groups

Continuation of studies	To continue studies	<ul style="list-style-type: none"> University information The types of learning environment The support services (finance, wellbeing, employability) that the university offers 	<ul style="list-style-type: none"> Personal tutor Programme team
	Personal environment	<ul style="list-style-type: none"> Whether financial support from family will be available Whether furlough arrangements from part-time job available through the year 	<ul style="list-style-type: none"> Student centre University communications Support network (friends and family) Government announcement Workplace decisions University retention office
	Interruption/ withdrawal	<ul style="list-style-type: none"> Future delivery methods of teaching University policy and regulations 	<ul style="list-style-type: none"> University policy document University communications University
Type of learning Environment	Online learning	<ul style="list-style-type: none"> University information Flexibility of the delivery Assessment support Digital tools and accessibility Digital poverty and access to equipment 	<ul style="list-style-type: none"> Personal tutor Programme leader Informative sessions set-up by the university
	Blended learning	<ul style="list-style-type: none"> International students: time zones and studying from abroad COVID-19 social distancing rules on campus Accommodation and the financing/guarantee in case of a lockdown 	
	Personal environment	<ul style="list-style-type: none"> Being isolated in case of a lockdown Shielding and health concerns 	

Part-time work to develop transferable skills or financial support	To not formally work	<ul style="list-style-type: none"> Information on other informal work opportunities such as courses or virtual internships Information about volunteering in the area that could fill the gap for transferable skills Attending extra-curricular activities provided by the university and develop stronger academic curriculum Speak with employability services and work on the CV/cover letter Speak with the generator team for entrepreneurial opportunities or side hustles Government updates and guidance on furlough and job retention scheme 	<ul style="list-style-type: none"> Business school employability office The generator enterprise team Government website Newspapers and trends in the industry
	To find part-time work		
	To continue in their previous job		
Student life and support network	To engage with the community online	<ul style="list-style-type: none"> The schedule of online events organised by the business school (networking events, get to know other events virtually, virtual seminars and 'coffee' meetings) Information about variety of societies offering programmes online through the student union and become part of the student union remotely The schedule of on-campus activities and the social distancing rules that apply such as the fresher fairs 	<ul style="list-style-type: none"> Business school employability office The student union Programme co-ordinators
	To travel to campus to take part in social distancing activities		

Appendix 2

Summary table of the details of the decision-making process map for third-year undergraduate students

Prospects after graduation	Graduate employment	<ul style="list-style-type: none">• Industry-specific work prospects• Jobs websites• LinkedIn and virtual internships to prepare graduate work	<ul style="list-style-type: none">• Business school employability office• The generator enterprise team• LinkedIn and government job skills programmes• Universities' websites and advisors• Programme leaders/tutors• Guest speakers from different industries• Government information pages
	Postgraduate studies	<ul style="list-style-type: none">• Teaching delivery methods for next academic year• Entry requirements for universities	
	Gap year travelling	<ul style="list-style-type: none">• International visa requirements• Visa Requirements and travel restrictions• Future updates from government	
To have part-time work or not?	To not formally work	<ul style="list-style-type: none">• Information on other informal work opportunities such as courses or virtual internships• Attending extra-curricular activities provided by the university and develop stronger academic curriculum	<ul style="list-style-type: none">• Business school employability office• The generator enterprise team
	To find part-time work	<ul style="list-style-type: none">• Speak with employability services and work on the CV/cover letter• Speak with the generator team for entrepreneurial opportunities or side hustles	<ul style="list-style-type: none">• Government website
	To continue in their previous job	<ul style="list-style-type: none">• Government updates and guidance on furlough and job retention scheme	<ul style="list-style-type: none">• Newspapers and trends in the industry

Learning environment

Studying at home through online platforms

Module and programme-specific information
Timetabling and delivery methods

- Government updates
- University communications
- Business school employability office
- Support network (friends and family)
- Programme tutors

Travel to the campus library/facilities away from home

University social distancing policies
Government policies on travelling

References

- Binnie, G. (2020, June 25). How university careers services are supporting graduates through Covid-19 [Blog post]. <https://www.universitiesuk.ac.uk/blog/Pages/how-university-careers-services-supporting-graduates-covid19-june-2020.aspx>
- Heracleous, L. T. (1994). Rational decision making: Myth or reality?. *Management Development Review*, 7(4), 16–23.
- McFaul, S. (2016). International students' social network: Network mapping to gauge friendship formation and student engagement on campus. *Journal of International Students*, 6(1), 1–13.
- Meehan, C., & Howells, K. (2018). 'What really matters to freshers?': Evaluation of first year student experience of transition into university. *Journal of Further and Higher Education*, 42(7), 893–907.
- Milliken, F. (1987). 3 types of perceived uncertainty about the environment—State, effect, and response uncertainty. *Academy of Management Review*, 12(1), 133–143.
- Moogan, Y. J. (2020). An investigation into international postgraduate students' decision-making process. *Journal of Further and Higher Education*, 44(1), 83–99.
- Sahu, P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): impact on education and mental health of students and academic staff. *Cureus*, 12(4), e7541.
- Tan, C. (2020). The impact of COVID-19 on student motivation, community of inquiry and learning performance. *Asian Education and Development Studies*, 10(2), 308–321.
- Tett, L., Cree, V. E., & Christie, H. (2017). From further to higher education: Transition as an on-going process. *Higher Education Quarterly*, 73, 389–406.



41

Locked Down but Not Locked Out: Personal Tutoring for Philosophy, Ethics and Religion Students and the Wider Community at Leeds Trinity University During COVID-19

Ann Marie Mealey

Introduction

It has long been accepted that with the widening participation agenda in higher education personal tutoring is a right and an expectation of undergraduate students (Hixenbaugh et al., 2006). When we open the doors to so many students, from so many diverse backgrounds, cultures and religious traditions, we need to be mindful of the support that we put in place to enable them to succeed, to settle in and, perhaps more importantly, to 'feel at home' in their university of choice. It is common nowadays to link student success not only with academic achievement but

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with the pastoral support that is provided by the university tutors that enables students to deal with whatever life brings to their doors whilst at university and to cope with the stresses of simply being a student. However, where are students most likely to turn when they need help and support?

In 2002, Dodgson and Bolam's research found that although universities provide an extensive range of student welfare services, most students surveyed only used either their student's union or their personal tutor for support (Dodgson & Bolam, 2002). Since students see their tutors in class, they often associate the human face of the university with those who teach them. The concept of relationship is key here. Where people form a connection with each other, they are more likely to seek support from that person. It is this kind of 'relationship' that lies at the heart of personal tutoring and has a central role to play in the UK higher education system.

Context

It is with this background literature in mind that I approached personal tutoring at Leeds Trinity since the beginning of lockdown. As a former Senior Teaching Fellow at Leeds Trinity University, I led the Advance HE accredited provision which includes the PGCERTHE (Postgraduate Certificate in Teaching and Learning in Higher Education) and the CPD Scheme (for Fellowship). At times the role involved being asked to lead on other teaching- and learning-related initiatives at the university which explains why I was invited by the Senior Management Team to lead on the 'COVID Response' to personal tutoring when the university went into lockdown. I have since changed jobs and work as an Associate Dean for Teaching and Learning (Teaching Enhancement) at Global Banking School.

This article discusses my experience linked to personal tutoring during lockdown with students of the Philosophy, Ethics and Religion programme at Leeds Trinity University, and the implementation of level tutors to champion student pastoral care across the university. This chapter concludes that—despite the need to continually improve how

personal tutoring is done at university level—‘relationship’ is key to working this out in a way that is beneficial for staff and students. This chapter will also include some suggestions for good practice and factors to consider in the post-COVID context.

Personal Tutoring and Widening Participation in Higher Education

Prior to the COVID-19 lockdown, much of the literature on personal tutoring focused on the importance of supporting students at university—especially if we are encouraging the widening participation agenda. Not only would it be disastrous for student attainment but also ethically questionable if universities were admitting students to programmes without providing the necessary support for them to succeed in their studies. For some, university should be a place where one ‘makes it on one’s own’, but for most it should be a place where both academic and pastoral support are provided by tutors—especially personal tutors. Owen’s work in 2002 for instance refers to the personal tutor as the ‘anchor’ of the university (Owen, 2002). Others ask whether the personal tutor role is in fact as clear as that at all. Stephen, O’Connell and Hall enquire about whether personal tutoring is about ‘going the extra mile’ or ‘fire-fighting’ or indeed whether it is more of a ‘laissez-faire’ arrangement between the staff member and the student (Stephen et al., 2008). More recently, Yale has argued that personal tutoring is about having and establishing a ‘shared understanding’ of what is required of both the tutor and the student at university (Yale, 2019). She argues that involves a shared set of expectations which again are upheld by the tutor and student and that the relationship is something which contributes to the ‘common good’ as it is pastoral in nature. The same author also argues—in response to the frequent feedback from academics that there is not enough time to do personal tutoring properly—that it is not that more time is needed from the tutor; rather, in Yale’s view, what is required is more quality interactions. This is often the experience of students when they are asked to attend personal tutor meetings without a clear agenda. Students don’t

know why they are there and there is often a lack of focus to the meetings. Furthermore, while some students appreciate a ‘I know you’re there if I need you’ type relationship with their personal tutor, others would like more proactive engagement (Hixenbaugh et al., 2006; p. 53).

Whatever the institutional approach to personal tutoring is, it is clear that Parkin and Brown’s work for Advance HE on Creating Socially Distanced Campuses & Education Project is pertinent: ‘student interests must be at the heart of every part of our conversations, along with their need to be valued as part of a community to which they belong’ (Parkin & Brown, 2020, p. 4). Two of the five principles outlined by SDCE project were extremely important for the work I did on personal tutoring at Leeds Trinity University during the pandemic. The two key principles are as follows:

- ‘The challenge is about people first, not technology’
- ‘Learning is above all else a human relationship’ (after Rogers, 1983, cited in Parkin & Brown, 2020, p.5).

It is with these principles in mind that I intend to discuss my experiences of my students and personal tutoring during lockdown. This chapter begins with a discussion of how I came to lead on a personal tutoring project at Leeds Trinity University. It then outlines what was implemented as a result of reflections on the institutional mission and context in the light of lockdown as well as providing a summary of feedback from staff and student focus groups on personal tutoring. This chapter ends by making some suggestions for ongoing reflection and good practice in the post-COVID context.

Lockdown: Project 2020 at Leeds Trinity University

When the university went into lockdown mode in March 2020, MS Teams hadn’t yet been implemented across the university. Skype for business was the only authorised and official means of doing conference calls

with students and personal tutees. My memory of going into lockdown was filled with the pressing question of: 'How am I going to continue to help our most vulnerable students if we don't have a tried and tested mechanism of doing this?'

In a moment of panic and uncertainty, I trusted the student rep of one of the programmes that I led at the university (philosophy, ethics and religion) with my phone number and told her to contact me directly if she knew of any pressing issue amongst the student body that I needed to know about. I felt uneasy about having done this as it was as if I was breaking my own cardinal rule of boundaries between staff and students. However, I thought that for the highest good of everyone involved, I would take the risk and hope that the student rep in question would respect my privacy and only use the number in case of emergencies.

She subsequently sent a message to her peers on a 'WhatsApp group' telling them to get in touch with her as their student rep with any programme-related issues as she would then be able to contact me as Programme Lead about them. For confidential issues, students were to contact their personal tutor. This worked relatively well for the first few weeks while MS Teams was being implemented and rolled out at the university.

In the meantime, the then executive had set up a team of colleagues from across all departments of the university to work on a range of issues such as the new timetable, accommodation, campus safety, marketing and communication, student welfare and student experience. I was invited to lead on a section of work that was being done under the 'student experience' workstream. This work was to lead and implement an approach to personal tutoring at Leeds Trinity University that would help support this mission which stipulates that all students are a 'name, not a number' and the identity as a university that offers education in a way that expects students to be known by their tutors, especially their personal tutor. In this sense, part of the mission of the university includes pastoral support that helps the learning and development of students enabling them to do their best and become 'socially impactful' individuals (Leeds Trinity University, Strategic Plan 2018–2021).

I quickly set up a group of experienced colleagues from across the university which included representatives from a range of programmes,

including Psychology, Teacher Education, Sport and Exercise Science and Student Support Services. I felt that there needed to be a ‘joined up’ approach to personal tutoring as there were several avenues for students to access personal support at the university but that these needed to come together to offer a more focussed and visible ‘COVID Response’ to personal tutoring.

I wrote down what I considered to be the key priorities for the Personal Tutoring Working Group that I was leading which, in short, included the need to support students personally and academically as well as enabling staff to understand and track levels of engagement and signpost to relevant university services where appropriate. A further key priority in my view at the time was to have a senior member of staff on every level of every programme who would foster and promote the ethos and principles of personal tutoring across that programme/level.

Implementing an Institutional Response to Personal Tutoring at LTU—Level Tutors

Driven by the need to support students in the best possible way, I felt strongly about the importance of appointing a colleague at each level of every programme at the university who would act as a champion for the promotion of a specific ‘ethos’ and role around personal tutoring for students. The individuals assigned to these roles would be called level tutors. They would monitor engagement and progress with the help from our Student Liaison and Engagement Officers, work with the well-being team to ensure that information about mental help support was available to all students and where to find this, and generate a sense of community and belonging for all students in the cohort—even though everyone was working remotely. They would also be responsible for creating and maintaining an ethos of personal tutoring amongst staff teams, reminding colleagues always to keep contact with their personal tutees and to make this a priority.

Training on the requirements of the role was provided and colleagues had the opportunity to engage with some very positive discussions about

personal tutoring at the university. In particular, colleagues wanted reassurance that they would be given sufficient time to do the role properly and that it was going to be recognised as a legitimate role that had institutional support—a point that will be picked up again below.

A Year Later: Reflecting to Move Forward

A year later, and still in lockdown, I gained ethical approval from the university's Ethics Committee to run two small focus groups with students and with level tutors to reflect back on the past year and to gain some insights about how the implementation of the level tutor role has actually gone and to gain further learning to support and inform the institutional approach for the future regarding personal tutoring.

The choice for using focus groups was based on the fact that they are considered to be a good choice for gaining views of a group of people on a particular topic. Although they require effective leadership in relation to how they are moderated, as one view could permeate the entire group, they allow participants to share experiences easily and openly.

Participants for both groups were recruited through an information sheet which outlined the purpose of the focus groups and the questions that would be asked about personal tutoring and level tutoring at Leeds Trinity. My email was given on the information sheet for interested staff and students to get in touch and sign the consent form.

Findings and Discussion

The Student Voice on Personal Tutoring

Students were asked three questions:

- What was your experience of personal tutoring during lockdown?
- What is your view of the new level tutor role?
- Any other comments on personal tutoring?

Some students commented that their experience of personal tutoring was enhanced through lockdown as their tutor was constantly in touch with them. One of them commented: 'It was a fabulous experience as I've spoken more to my personal tutor during lockdown than I would have done when we were on campus'. This may or may not have been the result of emails generating an 'ethos' of personal tutoring but it was clear from the comments that students found it easier to contact their tutor during lockdown compared to the days when all teaching took place on campus. Students also pointed out that the use of MS Teams for personal tutees by one member of staff created a sense of community amongst this particular tutor's tutees and they were able to chat to each other across the MS Teams site, thereby making them feel better connected to their peers in other year groups as well as the personal tutor. A quote that encapsulates their experiences is as follows: 'It was great actually because we were able to chat about other things and not just work'.

Further comments related to the fact that students felt more confident to 'reach out' to their personal tutor if they have been at the university longer. One student commented that they had more confidence asking their personal tutor for help at Level 6 in comparison to Level 4 because the student knew exactly what the appropriate role of the personal tutor was—rather than having to speculate about it or be 'too scared' to contact their tutor as had been the case when they were in first year. 'I think it depends on what level you're at as to how you use your personal tutor', she said.

There was also a comment about 'being in it together'. One student felt that their experience was valued and respected by the tutor and that they were together on the learning journey—fostering mutual respect and understanding. 'It's a level playing field', they said. This was thought to have helped the student with confidence and a sense of support and belonging that they didn't feel prior to this when they didn't fully understand what was on offer through the personal tutor role.

Regarding the implementation of the level tutors, students were aware of this person's role, and had received email correspondence from them throughout the year. They felt that the events that were organised by a particular level tutor on employability were extremely positive.

Where students didn't attend these meetings/events or their personal tutor, there was sense that, in their own words, 'we didn't fully understand what the role of the personal tutor actually was'. This demonstrates the need for institutions to make it absolutely clear to students what is on offer through the personal tutor at university.

The Staff Voice on Level Tutors

Staff were invited to a focus group where three questions were asked:

- What is your experience of how the level tutor role worked this year?
- Do you think you have enhanced the focus on personal tutoring at LTU? Explain how.
- Any other comments on the role?

Interestingly, all the tutors commented on the need to be 'on-campus' to be more effective in supporting students and in making it clear to students what the level tutors actually is all about. This seems to suggest a need to adopt a blended approach to the role as being purely online seems to have limited the interactions that level tutors had hoped for. One comment that conveys this was: 'the level tutor concept is a very good one but it might not have been an ideal time to implement it because of Covid and not being on campus. I think being remote meant that there was a little confusion about the role'.

Tutors praised the role in the sense that it provided a route for the Student Liaison and Engagement Officers (whose primary role at the university is to track student engagement and attendance) to engage directly with a tutor on the programme team in order to discuss and agree actions pertaining to student engagement and attendance. The tutors were extremely supportive of the opportunity to discuss together with Student Liaison and Engagement Officers (SLEOs) issues that might have been disclosed by students to them rather than to the personal tutors themselves. Staff commented that 'students might be more likely to disclose something to an SLEO than to us but it's good to know they're talking to someone at the university'. The latter is a very interesting point

indeed as it shows that often students turn to other individuals in support roles and professional services roles, especially if they have somehow come to know these colleagues better than their personal tutor.

The level tutor role was also commended because these engagement meetings allowed level tutors to get in touch directly with personal tutors to inform them of the need to contact their personal tutees to offer additional support for their studies and their general well-being. One level tutor commented that they had set up a weekly online drop-in for Level 4 students but that they noticed that students did not use this opportunity unless they were having ‘significant problems’. ‘Students don’t tend to use the resources of support that are available to them unless they’ve got significant problems’. The same tutor pointed out that students need to know that they can go not only to their personal tutor but also to the level tutor in order to find help, support and much needed encouragement as they progress with their studies. ‘They need to know that they have someone there—a secure “port of call”—‘which we all need at times’.

A further comment that was shared by all tutors in the group was the need to ‘re-launch’ the level tutor on campus perhaps with an event that was clearly backed by the executive team. They underlined the need for level tutors to be taken seriously by the institution, to be known as an important role in departments and across the university and for these individuals to be supported as having a remit around the culture of personal tutoring at the university. This point was particularly interesting as the level tutor role did have support from the executive leading the university at the time of the first lockdown but this comment makes it clear that the visibility of this still very much matters to staff in their roles. ‘There is not enough awareness in some departments about the significance of this role’, one member of staff said while another said: ‘we need a re-launch in September’.

Finally, one tutor mentioned that although an MS Teams site was set up to support level tutors in their role and to facilitate discussions around personal tutoring, boundaries, experiences and expectations, it would be good practice to set up a network for level tutors and for personal tutors where all tutors could feel supported in this oftentimes challenging and complex role at the university. He said: ‘we need a forum where level

tutors meet and share group practice with each other. MS Teams is not really the same as face to face’.

Insights for the Future

The experience of staff and students at Leeds Trinity University who participated in focus groups around personal tutoring during lockdown were largely positive. This is not to say that it was positive across the entire university as the study was not large scale enough to determine this. However, it is nevertheless important to point out that there were undoubtedly elements of good practice around personal tutoring taking place over the past year. What we can learn from this resonates with much of what has already been written in the literature on personal tutoring. For instance, students appreciated, to use their own words, a ‘level playing field with tutors’. As Lochtie, McIntosh, Stork and Walker point out, the core values of a personal tutor matter to students a great deal (Lochtie, McIntosh, Stork, & Walker, 2019). Students pick up on how they are being treated, valued, respected and listened to by their tutors so it is important that an ‘equal partner’ approach (rather than a ‘superior’ one) is adopted by personal tutors towards students (Lochtie et al., 2019, p. 33). Approachability, openness and compassion are also important to students as they very much value the opportunity to discuss matters with their personal tutors—even if the tutor is merely ‘sign-posting’ them to other professional services at the university.

A second insight that emerges from this study is that students appreciate contact from their tutor and that an MS Teams site where other tutees were connected directly with their personal tutor gave students a sense of being part of something at the university which offers them direct support and an easier route to communication with staff that the campus could not offer as efficiently and readily in the pre-COVID setting. This online site seems to have helped foster an ‘organisational culture’ which students appreciate and respond to, and which, as Guiso et al. (2013) point out, helps improve ‘consistency and performance’. An aspect of personal tutoring that is often overlooked is the fact that some of the research shows a direct relationship between the ways in which

students feel about their relationship with their tutors and their learning and progression which is a further reason why personal tutoring should always be on the institutional priority list for universities (Braine & Parnell, 2011).

Conclusions

Post-COVID, what we can learn here is that the online platforms that have now become part and parcel of how we interact with students should continue and that we need to foster a culture of dialogue concerning approaches to personal tutoring that were successful in lockdown and which can be carried forward to a post-COVID context.

A further insight that was highlighted in the staff focus group is that they feel the need to be supported both institutionally and individually as having a clear role of responsibility for promoting the culture of personal tutoring through (in the case of Leeds Trinity University in the past year) the level tutor role. For staff, it would appear that role profiles matter and that it is important that these are seen by the university to be important to its values and culture and that they are supported from the most senior levels of leadership. This links clearly with the work of Guiso, Sapienza and Zingales who argue strongly that there is a direct relationship between the values of an organisation and how the staff see their roles within it. ‘...values need to be “lived” throughout the organisation’, as The Great Place to Work Institute points out (Guiso et al., 2013, p. 5). Therefore, if personal tutoring and level tutoring are given more visible institutional backing, it is more likely for these roles to be seen by staff as a being worthy activities—along with research and teaching.

A further point that emerged from this small study of the implementation of level tutors at Leeds Trinity University has to do with the fact that tutors who took part in the staff focus group were very clear that being on campus and being able to reach students face to face still plays an important role in getting to know students, reaching them and letting them know that the support from tutors is there should they need it. This seems to suggest that a blended approach to personal tutoring in the post-COVID context might work best.

However, as Neuwirth et al.'s (2021) recent work shows, a blended approach may not simply mean a return to what was considered 'normal' prior to the pandemic—with online included as we now feel proficient in it. Rather, 'the mode that faculty should be in is *not resumption*, but rather *re-envisioning* and *re-imagining* the design and delivery' of all aspects of what we offer students in HE—both in relation to the curriculum and personal support (Neuwirth et al., 2021, p. 143). They also argue that we need to consider who gets access to the support that we provide for our students. Although this small study of personal tutoring at Leeds Trinity University did not focus on the social justice aspects that affected students accessing pastoral and/or academic support from their personal tutor, it is nevertheless a factor that is worth noting. Those who experienced online personal tutoring got a lot out of it but we need—perhaps in a further study—to consider that while all students may need and want 'security' and support (Neuwirth et al., 2021, p. 144), some do not access what is available because of digital poverty, embarrassment about turning on their camera at home or worry about others judging them and/or their home environment in some way (p. 148). 'Students may face privacy issues and concerns where they may not want to turn on their computer camera because: they do not want people to look at them or the environment in which they live' (p. 148). All of the above could potentially affect whether students contact or even respond to contact from their personal tutor. These questions remain in a post-COVID context. And how we understand them may well be context and/or country specific. Referring to Bangladesh and Nepal, Shrestha et al. argue that frequent power-cuts or poor IT infrastructure for instance can dramatically impact on learning and accessing support for learners (Shrestha et al., 2021, p. 261).

In short, the role of the personal tutor is significant and will continue to be significant in supporting students post-COVID. Having a good personal tutor can have a profound and lasting impact on the experience of our students at university and 'relationship' is key to the success of this. As one of the students in the focus groups I ran pointed out: 'It was an amazing experience being able to talk to my personal tutor about things, especially during the pandemic. It made me feel as though we were on an

equal playing field. That's the way it should be at university: a two-way system'.

That being said, as the social and personal contexts of our students' lives continue to change, there will continue to be a need to re-engage again and again with mechanisms of support that are being provided by personal tutors and others who interact with students at university. There will also be a need to interrogate why some students are not accessing the support from their personal tutor and ascertain whether some deeper societal factor is at play here. Furthermore, as new pedagogies emerge, it is likely that students will require different levels of support and guidance too. The dialogue therefore between staff and students about the 'student-personal tutor' relationship is paramount. This also needs to exist alongside deep reflection on the social and context-specific aspects that may be affecting the learner context which, if we are to really find out what is going on in the lives of our students, requires us to have good professional relationships with them. Relationship, once again, is key.

In short, it is clear that personal tutoring and its ability to genuinely be of value to students will depend on our willingness to keep in on the institutional priority list and re-engage with its effectiveness on a continuing basis. The task of understanding this supportive relationship between staff and students is therefore ongoing.

References

- Braine, M. E., & Parnell, J. (2011). Exploring students' perceptions and experiences of personal tutors. *Nurse Education Today*, *31*, 904–910.
- Dodgson, R., & Bolam, H. (2002). *Student retention, support and widening participation in the North East of England*. Regional Widening Participation Project, Sunderland, Universities for the North East of England. www.unis4ne.ac.uk/unew/ProjectsAdditionalFiles/wp/Retention_report.pdf
- Guiso, L, Sapienza, P, & Zingales, L. (2013). *The value of corporate culture*. Chicago Booth Research Paper No. 13–80; Fama-Miller Working Paper. <https://ssrn.com/abstract=2353486>
- Hixenbaugh, P., Pearson, C., & Williams, D. (2006). Student perspectives on personal tutoring: What do students want? In L. Thomas & P. Hixenbaugh

- (Eds.), *Personal tutoring in higher education* (pp. 45–58). Institute of Education Press.
- Lochtie, D., Emily, M., Andrew, S., & Ben, W. W. (2019). *Effective personal tutoring in higher education*. Critical Publishing.
- Neuwirth, L., Jović, S., & Runi Mukherji, B. (2021). Reimagining higher education during and post-Covid-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156.
- Owen, M. (2002). Sometimes you feel you're in niche time': The personal tutor system, a case study. *Active Learning in Higher Education*, 3(1), 7–23.
- Parkin, D., & Brown, G. (2020). *Creating socially distanced campuses and education project: Final capstone report*. https://www.usaf.ac.za/wp-content/uploads/2020/07/Advance-HE_Social-Distance-Project_Final-Report_July-2020.pdf
- Shrestha, S., Haque, S., Dawadi, S., & Giri, R. A. (2021). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and Information Technologies*, 27(1), 243–265.
- Stephen, D. E., O'Connell, P., & Hall, M. (2008). 'Going the extra mile', 'fire-fighting', or laissez-faire? Re-evaluating personal tutoring relationships within mass higher education. *Teaching in Higher Education*, 13(4), 449–460.
- The Great Place to Work Institute. (2014). *Organisational values. Are they worth the bother? How values can transform your business from good to great*. Great Place to Work Institute.
- Yale, A. T. (2019). The personal tutor-student relationship—Student expectations and experiences of personal tutoring in higher education. *Journal of Further and Higher Education*, 43(4), 533–544.



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Protecting Student Retention through eMentoring during a Pandemic

Mohammad Aminul Islam and Md Mahbubul Islam

Transitions in Bangladesh and Global Higher Education during the Pandemic

With the nationwide lockdown from mid-March of 2020, all academic activities experienced mandatory closures in Bangladesh. Following other countries of the world, an online-based virtual mode of teaching exposed the academics of Bangladesh to an immersive and innovative delivery of the contents (Khan et al., 2021; Shrestha et al., 2022). Teaching and learning online was a new experience for Bangladeshi teachers and students who had to adapt new pedagogy, course materials and instructional management through online platforms to accommodate diverse teaching and learning options (Hodges et al., 2020; Khan et al., 2021; Al-Amin et al., 2021).

Teaching in a disruptive situation could be seen in some cases as dealing with inclusivity inside the classroom where students experienced challenges with access, resources and financial constraints (Khan et al.,

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2021). Teachers at higher education institutes had been experiencing 'role ambiguities' and adapted themselves to the teaching aligning with technologies (Boyer-Davis, 2020, p. 43). On the other hand, students at undergraduate levels faced numerous academic and financial problems which affected their mental health and well-being that were being accommodated with their adaptive coping behaviour (Mahmoud et al., 2012). Amidst such 'mental health vulnerability', globally students and teachers had to rethink their self-management with their academic demands during the pandemic (Nordmann et al., 2020, p. 3). However, due to the constraints of resources and accessibility, some students failed to keep up with the pace of the discussion and felt excluded and isolated, and were likely to experience anxiety about future academic standing. Hence, teachers had to address these challenges to ensure student retention and their teaching efficacy (Darling-Hammond & Hyler, 2020).

In Bangladesh, the pandemic also caused teaching-learning interruptions and brought forth negative consequences on the academic and social life of university students (Dutta & Smita, 2020). Learners experienced isolation and demonstrated anxiety, depression, lower mental well-being and symptoms of psychological stress due to the pandemic (Faisal et al., 2022). Moreover, losing part-time jobs or private tuition, most of them suffered from financial insecurity. Consequently, many of them dropped out of their regular course of study (Dutta & Smita, 2020). Perceiving the stress and anxiety, more research was demanded to find ways to improve the 'academic performances, retention and persistence' of students (Boyer-Davis, 2020, p. 54).

English Language Teaching in Bangladesh Higher Education

Universities in Bangladesh offer at least one or more foundation courses in English to the new entrants (Khan & Chaudhury, 2012; Jamil, 2020). For most of them, with the changed situation, attending classes online was a new experience (Gopal et al., 2021) that required teachers' intervention to make learning activities flexible and easier (Khanum & Alam,

2021) so that the new students could grow with the new environment (Sarkar et al., 2021). Hence, online teaching and learning require suitable pedagogic approaches (Khan et al., 2021) with affective or emotional support (Alvarez, 2020). Moreover, for language learners, poor learning outcomes occur due to anxiety, low motivation and low self-esteem (Sultana, 2014; Krashen, 1982; Dulay & Burt, 1977). In the context of language teaching at Bangladeshi higher education through online platforms, students struggled to improve their writing and speaking skills with insufficient interaction, anxiety and less ability to filter out information and feedback (Dong, 2020; Khanum & Alam, 2021). Therefore, innovative learning methods were applied, and mentoring the struggling and less on show learners was imperative to sustain the retention rate.

Teachers' Changed Roles as eMentors

Mentoring is an informal development-driven process that occurs with the development of a relationship between a mentor and a mentee addressing a sense of belonging, communication skills, self-awareness and self-esteem (Miller, 2020). People around a person usually play an important role to stimulate or steer his/her feelings. If they are found at an unexpected level, the person gets depressed. Sometimes even non-human actors, for example, a critical situation like a pandemic, or joblessness, overpower a person and make him/her feel stressed and depressed. With the new situations and strict regulations amidst the COVID-19, the young generation was facing new types of challenges like negativity and self-derogatory references (Kurshan, 2020). Many students faced disruptions in regular studies and were forced to change their higher education plans. Moreover, students in the new isolated situation faced difficulties interacting with each other and lost the trick on how to win the psychological sustenance and cooperation of others by accepting eLearning and building a sense of community for academic, personal and mental support through different platforms (Tarr, 2020).

The traditional roles of a teacher included those of a 'planner', a 'curriculum and material developer' and a 'monitor and assessor of students' learning and managing learning behaviour' (Richards & Lockhart, 1996,

p. 97). Apparently, teachers during the COVID-19 pandemic undertook various affective roles such as a study guide, a career advisor and a psychological counsellor which is a combined form that could be identified as mentoring. In other words, this kind of online support could be termed as eMentoring and defined as 'a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling' (Bierema & Merriam, 2002, p. 214).

The Study

This exploratory research examined the relative importance of mentoring and English language teachers' role as mentors during the pandemic situation to deal with student retention managing their depression, anxiety and stress (Mahmoud et al., 2012). It aimed to find answers to the following research questions regarding eMentoring and its significance in the retention of students in higher education during the COVID-19 pandemic.

1. What innovative approaches to eMentoring have the English language teachers adopted in a Bangladeshi university to ensure student retention during the pandemic?
2. How do the English language teachers adapt to the changing roles as online mentors?

Methods

The researchers explored the innovative approaches to eMentoring adopted by English language teachers at a Bangladeshi university to understand the changing role of these eMentors to ensure student retention during the COVID-19 pandemic following a qualitative phenomenological research design (Moustakas, 1994). Five English teachers at a private university were interviewed with a semi-structured interview questionnaire through online meetings using Google Meet. The goal of

an interview is to learn about another person's views and perspectives, and 'find out from them those things we cannot directly observe' (Patton, 1990, p. 278). When dealing with participants who may be less willing to talk freely in a large focus group with other participants, one-on-one interviews will be beneficial (Creswell, 2013). One-on-one interviews were being used in this study to hear participants explain the concept of eMentoring and its importance in the retention of student in higher education during the COVID-19 epidemic in their own words.

For triangulation of the data, five undergraduate students at the same university were given a questionnaire containing seven open-ended questions through a Google Form. In qualitative exploratory research, open-ended research questions are used to allow for answers to emerge. A truly open-ended inquiry does not assume which dimension of emotion or thinking would be prominent for the respondents (Patton, 1990). The researcher pays attention to what individuals say or do in their daily lives, hence open-ended questions are typically used in a qualitative study (Creswell, 2013).

All the participants were conveyed the purpose of the research both verbally and electronically, and they filled up informed consent forms before their participation in the study.

Participants

Five teachers of English at a Bangladeshi university were chosen purposively based on some inclusion criteria including their active involvement in teaching during pandemic situations, and five years of experience in teaching and mentoring undergraduate students. In other words, all of them were capable of comparing and contrasting mentoring students both face to face and online and thus were able to share their insights about eMentoring. Moreover, accessibility, availability and willingness to be interviewed were the other important considerations in their recruitment process. The researchers communicated with them through emails informing the purpose of the research and got them to sign informed consent forms electronically. The researchers also selected five students purposively. Inclusion criteria included their enrolment status with at

least one English language credit course, had instructions online at least for two semesters and received mentoring support from their instructors so that they could relate their experiences with the enquiry of the current study. The students were emailed describing the purpose of the study ensuring anonymity of student participants and protection of the data.

Data Collection

Teachers were interviewed using Google Meet with a semi-structured interview questionnaire and the interviews were recorded for 45 minutes on average. Besides, an electronic form of seven open-ended questions was given to five students to gather relevant data to validate the interview data of the teachers. The questionnaire was circulated through Google Form informing the students by email with a reminder before the expected time of submission. As the entire process of data collection with both teachers and students was done in English, the raw data were transcribed before thematic analysis.

Data Analysis

The data were analysed following an inductive approach as data were collected through open-ended questions both by interviewing the teachers and administering a survey with the students to get their opinions about eMentoring. An analytical framework method was applied for analysing the data following several steps. First, the interviews of teachers and students' responses were transcribed verbatim. Then, the two researchers read and reread the transcribed data, and listened to the audio records to familiarise themselves with the collected data. Next, the researchers started coding by segmenting the data into meaningful units and highlighting important keywords, concepts and ideas in teachers' interviews and students' responses. After that, the groups of similar codes were put under certain categories of concepts and ideas for extracting essential information from the transcriptions to develop themes and subthemes (see Fig. 42.1). The coding process is done manually using a pen, paper

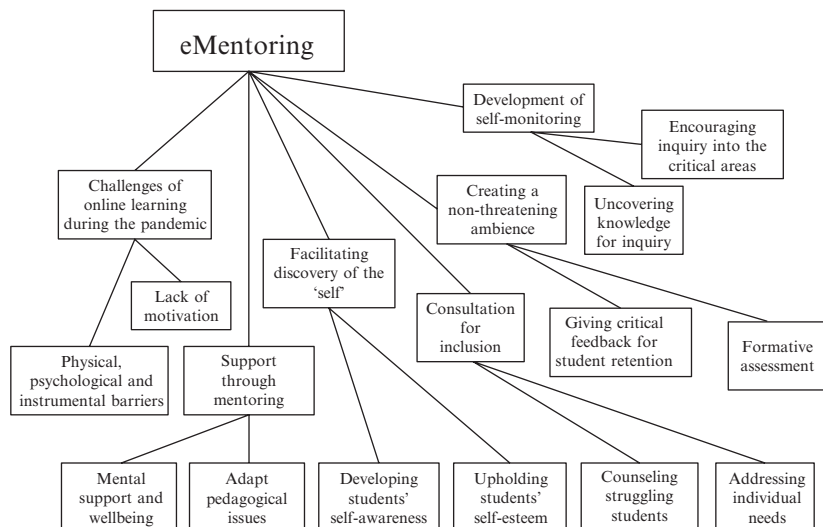


Fig. 42.1 Thematic presentation of eMentoring

and highlighter. Here, all the themes and subthemes and quotations were indexed side by side for a visual presentation of the data. Finally, the data were interpreted under various themes or phenomena with grounded argumentation.

The Phenomenological Research Design

The research was done under the qualitative interpretivist paradigm and the chosen method of the study was phenomenology (Moustakas, 1994). Phenomenology is an appropriate design for exploratory research when the main objective of the study is to explore a phenomenon which was studied little in a given context. The researchers usually collect data from knowledgeable informants who have first-hand experience of the phenomenon (Creswell, 2014). The analysis is done thematically by interpreting the data, and the results can be applied to build new theories. As the current research aims at exploring the innovative approaches to eMentoring of some Bangladeshi English language teachers in an academic setting during the COVID-19 pandemic, the phenomenological

research design is a suitable method to gather rich data through in-depth interviews of the participants. Besides, students' opinions were expected to help triangulate the data. In the study, the researchers complied with state-of-the-art ethical practices. The participants of the research were informed beforehand and in detail about the aims and objectives of the research and their freedom of participation was ensured throughout the research process. Participation in the study was voluntary, free and for academic purposes.

Findings and Discussion

Understanding the innovative approaches to eMentoring involves the identification of the various online learning challenges and solutions. Students' lack of motivation and different physical, psychological and instrumental barriers were identified as the key challenges in online English language learning, and language teachers supported the struggling and irregular undergraduate students through mentoring, helped discover the 'self', provided consultation for inclusion, created a non-threatening ambience and helped develop self-monitoring capacity among the target students. Thus, the teachers had been able to deal with the dropout issues of the struggling students during the pandemic.

Challenges of Online Learning during the Pandemic

The online-based learning activities brought together the complex physical, mental and instrumental barriers as reported by the learners during the pandemic. In addition, the teachers reported that the learners lacked the motivation to learn a foreign language online. The COVID-19-affected students demonstrated a general tendency to avoid online classes. Even when their relatives were affected, they often showed reluctance to participate in the live discussions.

Lack of Motivation

Behind students' lack of motivation, the teachers identified some factors. The absence of physical interaction urged the students to remain passive. Therefore, the teachers had to create diverse opportunities for interactions in the online meetings. In spite of having all modified and learner-friendly arrangements, often the teachers found the expected level of interactions among the learners was utterly missing. Understandably, one potential reason behind such inaction could be that the learners were not sufficiently prepared to work online, and they suffered from anxiety due to various external factors surrounding their personal and social domains.

Psychologically they were not prepared and present in the class. They are being forced. They don't enjoy the classes. (T1)

Physical, Psychological and Instrumental Barriers

Along with teachers, learners also echoed similar kinds of physical and psychological challenges with continuous academic pressure.

No matter whatever condition we were in, we were bound to complete assignments just for good grades despite having health issues. And it was both physically and mentally disturbing. (S2)

Apart from the physical and psychological barriers, the respondents identified unstable internet connectivity and lack of suitable gadgets as the primary instrumental barriers. Combining these complex phenomena, the financial crises compelled a good number of learners to drop the courses which created the context of teacher interventions in the form of eMentoring as an academic caregiving strategy during the pandemic.

Supporting through Mentoring

With the changing context, when some students were forced to leave their courses incomplete, the teachers appeared as mentors to solve their

problems. As mentors, teachers supported students by reducing mental stress so that they could continue their studies. Almost all teachers espoused their new responsibility during the pandemic.

Being a faculty or a mentor, this is my responsibility and duty to help students out from different crises. (T1)

Knowing that this kind of extra support for learners would increase teachers' current workload and hamper their personal space, they extended this mental support for the well-being of the learners.

I tell my students, even if it is at midnight, and you are in a state to talk to someone but you are not getting anyone around, just take the cell phone and call me. (T5)

Adapting Pedagogical Issues

Within the adaptive situations, the teachers adopted different strategies to give space in an online format or to engage students meaningfully. Providing this kind of support entailed extra time as consultation hours, and preparing purposeful and interesting language learning activities like songs and video clips from which students could get the impetus. In addition, some teachers reported mentoring with irregularity issues.

For slow learners, I give texts from different sources like newspapers. They sit in groups and analyze the texts and share their thoughts with their peers. (T2)

In all these interventions, teachers' proactive roles could be seen as a strong relationship with students to open themselves up or share their problems in a strong and trustful relationship. Often students sought a space for mental ventilation and sometimes were found reluctant to share their problems and discontinued their studies. Hence, teachers' role as flexible guides established that trust to build such relationships and teachers being the only connected source was recognized as an emblem of space.

I always inspire them by highlighting individual strengths more than their weaknesses so that I can build a dependable situation. (T4)

Students also affirmed teachers' availability and approachable instincts as expected characteristics of supportive eMentors as they got extended support from their language teachers as guides and problem solvers in their online learning.

Whenever I have faced technology or internet related troubles, I got the help of my teachers through mail or other social platforms. (S5)

Facilitating Discovery of the 'Self'

Creating learner identity and discovery of the 'self' among others in a language learning context are significant markers of improved self-esteem. Additionally, growing self-reliance and confidence are considered facilitative factors in learning a foreign language. The following discussion will shed light on how the English language teachers facilitated the development of self-esteem and generation of self-reliance of the learners through mentoring online.

Upholding Students' Self-esteem

For developing self-esteem, teachers appreciated the students a lot and encouraged them to share their perspectives. As learning the English language online seemed difficult, teachers sometimes overlooked inappropriate forms of language to make students confident. Even while giving feedback, teachers remained cautious in choosing words.

I appreciate them and also make others appreciate each other. I don't discourage them; they might feel marginalized. (T1)

As students from rural areas were psychologically vulnerable, they were put in pairs and groups with abler students. Some weaker students who were less on the show felt confident interacting with abler students.

While discussing in groups, students realize that they are not the only ones who face problems. I try to make a strong and real-life logic on how to tackle these situations and raise their self-esteem. (T3)

Moreover, with teachers' mentoring, peer mentoring had been initiated, and teachers were more vigilant beyond the classes through different social media.

Developing Students' Self-awareness

Students' perception of the development of self-esteem and self-reliance was not as precise as that of the teachers. They considered certain activities and behaviour of the language teachers as self-development initiatives for the learners such as effective communication, explanation of the contents and clarification of learners' queries, provision of simplified and interesting lessons and openness and flexibility in setting the deadlines of the deliverables.

My language teachers are helping me to develop my language skills and my self-confidence. (S1)

Supporting the previous learner's view, another learner appreciated the positive responses of the teacher in the online lessons.

Whenever I or any of my classmates ask a question, even if it is the fourth time, our teacher ensures that we understand the lesson properly. (S4)

Learners' self-esteem increased through appreciation, monitoring of students' learning and online-based communication initiatives of teachers. On the contrary, some teachers reported that online education increased students' depression and made them demotivated. The social life of the campus was absent in the virtual platforms where the sense of belonging in the face-to-face interactions was not affirmed. In fact, interaction is a key to growing confidence which online classes could not provide. Moreover, as students were reluctant to be on their camera, it was

difficult to monitor their non-verbal cues like gestures, posture, facial expressions and so on. In this context, maintaining learners' confidence was a major challenge for the concerned teachers.

Sometimes they pretend to be confident but by talking to them we can see that they are not. They mostly feel insecure. Demotivation and less confidence come because of confinement. (T1)

Nevertheless, some teachers took online platforms positively as those had created new learning spaces which could be utilized for reversing learners' attitudes toward online learning and making them interested to continue their studies.

Students through online platforms started experiencing benefits in diverse ways. For example, students are asked to rehearse and record their voices for better presentations. (T5)

Combining the opposite views demonstrated by the teachers of English, it can precisely be said that for a language learner, having self-esteem and confidence is important. The success of online education entails both teachers' and learners' changed attitudes and behaviour. Hence, teachers' initiatives and strategies as mentors can enhance learners' self-esteem and self-reliance to make positive impacts on the learning of the students and prevent dropout cases during a disruptive situation like COVID-19.

Addressing Individual Needs Promotes Inclusion

According to the social-constructivist views of learning (Vygotsky, 1962), having constructive feedback scaffolds language learning. For that, students need constant support and positive rapport with their classmates and teachers. With eMentoring, teachers tried to address these issues for struggling students according to their needs. Struggling and irregular students needed individual support to continue their academic performances. As students faced diverse problems, social media and

asynchronous platforms seemed useful along with the synchronous platforms during the pandemic situation to ensure sustainability, inclusion and student retention. Another useful strategy for student retention was to provide interesting materials as a reinforcement before the discussion sessions.

There are irregular students in my class and I send them required materials, for example, video files with instructions and worksheets two days before. (T3)

The students in the study agreed that the English language teachers as mentors valued their positions during the pandemic by considering both academic and personal issues, and providing effective solutions.

They were highly supportive in this regard. We were welcome to ask questions in our class time, they even appreciated it a lot. (S3)

Participants, in general, were of the view that remaining open and providing regular consultation assisted the learners to achieve their learning goals. Moreover, involving students in various learning activities in groups through the online media increased the chances of student retention during an emergency situation.

Counselling Struggling Students

Monitoring students' learning in the context of distance teaching is one of the significant facets of eMentoring. As discussed earlier, students were observed during class time and teachers identified those who did not participate in pair or group work. Teachers here helped them to overcome those challenges while sitting one on one. Even, in some cases, for better understanding and fruitful communication teachers allowed students to speak in their native language.

Most importantly, sometimes I allow my students to speak in Bangla so that they can share their problems freely in particular situations. (T3)

Apparently, during the COVID-19 pandemic, some cases illustrated language teachers' additional role as counsellors or mentors to instil confidence in students' minds and ensure consistency in their academic journey.

One student felt that the course might be difficult and wanted to drop it. We consulted twice with her both over the phone and live (online). When she found two of the teachers are reachable, she gained confidence. (T2)

The students also had similar observations about the teachers' continuous effort to monitor their studies and performances during the pandemic. They opined that the language teachers were much more supportive, patient and empathetic towards the learners.

We are overwhelmed by the soft and caring gestures of our language teacher. In every class, he asks every single student of the class if he or she is alright. (S4)

Creating a Non-threatening Ambience through Interactions and Critical Feedback

Seemingly, while language teachers' focus predominantly remained on the pedagogy and materials, considerations of the language of instructions and the language of feedback played a significant role to put more emphasis on learning. Hence, giving constructive feedback could be a significant aspect of creating a non-threatening ambience. Dealing with feedback during eMentoring entails the measurement of learners' psychological state, their level of endurance to accept feedback and also their willingness to continue the learning journey. Given that learners with poor linguistic ability and irregularity in online classes required mentoring, teachers as mentors found solutions for ensuring learners' retention.

Negative feedback demotivates them and negativity frustrates them. Through constructive feedback, we give them the feeling that they are on the track and motivate them thereby. (T2)

Even students demonstrated a positive attitude towards the feedback they received from their teachers.

My English teacher individually gave me feedback on the flaws in my journals which helped me to understand them clearly. (S1)

One of the students in the study commented very enthusiastically on the phenomenon of eMentoring as a space for mental support.

Teachers can be mentors, as well as a space for mental support. Their positive words, consolation, and behaviour can change students' minds and motivate them to go forward. (S4)

Development of Self-monitoring

With self-motivation, self-monitoring can be a tool for online teaching and learning. Being mentors of struggling students, teachers took the challenges of intervening with new techniques for attaining students' competence in self-monitoring. For example, they initiated peer mentoring, probed or prompted questions to think critically and made pairs or groups mixing a balance of learners with strong abilities and struggling learners.

I sometimes put them together, mixing with students with better abilities and weaker abilities. Here, while working together they easily can see what is not with them, how the stronger students react and what they require. (T4)

Encouraging Inquiry into the Critical Areas

While mentoring students, teachers often deliberately created opportunities where students found certain scopes of identifying their shortcomings and enhanced their awareness of the target language.

When students were asked to record their voice and send it to me after checking them following the rubric, one student reported mixed up

sentences. Students analyzed their own problems and based on their assessment and analysis they realize their situation. This really works well. (T3)

The students also showed their awareness of the overwhelming nature of online communication, and the complexities of interactions with teachers and peers to grow as self-dependent learners. Hence, the eMentors conceived of intervention opportunities to foster the competence of self-monitoring among the struggling students.

Our teachers developed their materials in such an engaging way that we were interested to interact with our peers and participate in the class on diversified issues. (S5)

Considering the divergent challenges of online-based English language teaching during the COVID-19 pandemic, one might naturally question the eMentors' abilities to control the learning situations and guide the struggling students. In fact, teachers as eMentors require proper training, appropriate tools and sufficient time to address students' diverse problems. However, they have developed various activities to keep the students on track of engagement with all the constraints around.

Learning for Future

Like any other qualitative study, the objective of this research was not to generalize the findings, but rather interpret and understand a phenomenon by exploring the lived experience of the participants. Nevertheless, the following key findings of the current study might be useful for future teaching and learning of a foreign language during any disruptive situations.

1. At least a certain portion of the curriculum might offer an online-based distance learning experience so that both teachers and learners get sufficient training to work in a distance mode or in any disruptive condition.

2. In-service teacher training programmes at higher education institutes (HEIs) can include certain contents and activities that would demonstrate how to facilitate students' discovery of the 'self' and make them aware of their self-esteem. Moreover, HEIs might have institutional arrangements to inform novice teachers about the significance of the mental health and well-being of learners during any emergency situation.
3. Teachers of HEIs can be made familiar with concepts such as inclusive education, various assessment strategies, and how to give effective feedback on students' work to facilitate a non-threatening learning environment.
4. Applying formative assessment for measuring learning is useful as summative assessment strategies may not be suitable for measuring performance during the pandemic. In fact, teacher informants of this study opined that with a summative tool, it would be difficult to determine learners' actual competence.
5. Finally, the teaching and learning activities might encourage inquiry-based, discovery-oriented education to develop the self-monitoring capacity of the learners so that they can take responsibility for their own learning during any disruptive situation.

Conclusion

Unlike teaching other subjects, foreign language teaching involves considering the affective aspects of the learners. For effective learning of a second or foreign language, the affective filter must be lowered. However, in a disruptive situation like the COVID-19 pandemic, the affective aspects naturally stayed high which made the tasks of language teaching and learning rather complex. In this research, the researchers demonstrated how the English language teachers at a private university in Bangladesh adopted various innovative strategies to lower the affective filters of the struggling students through eMentoring. However, the study revealed that the teachers and administrators were neither ready to teach nor manage students' learning from distance in the disruptive situation of the pandemic as they had little training on how to handle the emotional

and affective needs of the learners while teaching English online. Therefore, the future faculty development training programmes should include particular components to equip the academics with the required skills on how to support the emotional and affective needs of learners during any emergency situation or student supervision or intervention scheme like eMentoring.

References

- Al-Amin, M., Al Zubayer, A., Deb, B., & Hasan, M. (2021). Status of tertiary level online class in Bangladesh: Students' response on preparedness, participation and classroom activities. *Heliyon*, 7(1), e05943. <https://doi.org/10.1016/j.heliyon.2021.e05943>
- Alvarez, A. V. (2020). The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education*, 15(1), 144–153. <https://doi.org/10.5281/zenodo.3881529>
- Bierema, L. L., & Merriam, S. B. (2002). E-mentoring: Using computer mediated communication to enhance the mentoring process. *Innovative Higher Education*, 26(3), 211–227. <https://doi.org/10.1023/A:1017921023103>
- Boyer-Davis, S. (2020). Technostress in higher education: An examination of faculty perceptions before and during the Covid-19 pandemic. *Journal of Business & Accounting*, 13(1), 42–58.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.
- Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID and beyond. *European Journal of Teacher Education*, 43(4), 457–465. <https://doi.org/10.1080/02619768.2020.1816961>
- Dong, J. (2020). Online learning and teaching experiences during the COVID-19 pandemic: A case study of Bangladeshi students receiving China's higher education. *English Linguistics Research*, 9(2), 37–45. <https://doi.org/10.5430/elr.v9n2p37>
- Dulay, H., & Burt, M. (1977). Remarks on creativity in language acquisition. *Viewpoints on English as a Second Language*, 2, 95–126.

- Dutta, S., & Smita, M. K. (2020). The impact of COVID-19 pandemic on tertiary education in Bangladesh: Students' perspectives. *Open Journal of Social Sciences*, 8(9), 53–68. <https://doi.org/10.4236/jss.2020.89004>
- Faisal, R. A., Jobe, M. C., Ahmed, O., & Sharkar, T. (2022). Mental health status, anxiety, and depression levels of Bangladeshi university students during the COVID-19 pandemic. *International Journal of Mental Health and Addiction*, 20(3), 1500–1515. <https://doi.org/10.1007/s11469-020-00458-y>
- Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*, 26(6), 6923–6947. <https://doi.org/10.1007/s10639-021-10523-1>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Jamil, M. G. (2020). Academic English education through research-informed teaching: Capturing perceptions of Bangladeshi university students and faculty members. *Language Teaching Research*. <https://doi.org/10.1177/1362168820943817>
- Khan, R., Basu, B. L., Bashir, A., & Uddin, M. E. (2021). Online instruction during COVID-19 at public universities in Bangladesh: Teacher and student voices. *Teaching English as a Second Language Electronic Journal (TESL-EJ)*, 25(1). <https://tesl-ej.org/pdf/ej97/a19.pdf>
- Khan, R., & Chaudhury, T. A. (2012). The Bangladeshi employment sector: Employer perspectives concerning English proficiency. *Indonesian Journal of Applied Linguistics*, 2(1), 116–129.
- Khanum, F., & Alam, M. M. (2021). Tertiary level learners' perceptions of learning English through online class during Covid-19 pandemic: A quantitative approach. *Dialogics*, 1.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- Kurshan, B. (2020, June 15). The pandemic & higher education: Old problems, new opportunities. *Forbes*. <https://www.forbes.com/sites/barbarakurshan/2020/06/15/the-pandemic-higher-education-old-problems-new-opportunities/#58732d696d67>
- Mahmoud, J. S. R., Staten, R. T., Hall, L. A., & Lennie, T. A. (2012). The relationship among young adult college students' depression, anxiety, stress, demographics, life satisfaction, and coping styles. *Issues in Mental Health Nursing*, 33(3), 149–156. <https://doi.org/10.3109/01612840.2011.632708>

- Miller, K. (2020). How do coaching, mentoring, and counseling differ? <https://positivepsychology.com/coaching-mentoring-counseling/>
- Moustakas, C. (1994). *Phenomenological research methods*. Sage.
- Nordmann, E., Horlin, C., Hutchison, J., Murray, J. A., Robson, L., Seery, M. K., & MacKay, J. R. D. (2020, October 1). Ten simple rules for supporting a temporary online pivot in higher education. *PLoS Computational Biology*. Public Library of Science. <https://doi.org/10.1371/journal.pcbi.1008242>
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Sage.
- Richards, J., & Lockhart, C. (1996). *Reflective teaching in second language classrooms*. Cambridge University Press.
- Sarkar, S. S., Das, P., Rahman, M. M., & Zobaer, M. S. (2021). Perceptions of public university students towards online classes during COVID-19 pandemic in Bangladesh. *Frontiers in Education*, 6. <https://doi.org/10.3389/educ.2021.703723>
- Shrestha, S., Haque, S., Dawadi, S., & Giri, R. A. (2022). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and Information Technologies*, 27(1), 243–265. <https://doi.org/10.1007/s10639-021-10659-0>
- Sultana, S. (2014). English as a medium of instruction in Bangladesh's higher education: Empowering or disadvantaging students? *Asian EFL Journal*, 16, 11–52.
- Tarr, T. (2020, May 12). How virtual mentoring is closing the loneliness gap during COVID-19. *Forbes*. <https://www.forbes.com/sites/tanyatarr/2020/05/12/how-virtual-mentoring-is-closing-the-loneliness-gap-during-covid-19/#44fdc7df5fff>
- Vygotsky, L. S. (1962). *Thought and language*. MIT Press.



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A Holistic Approach to Teaching Final-year Business Students in Malaysia during COVID-19

Yong Yuan Teh and Elaine Yin Teng Chew

Introduction

The COVID-19 pandemic has brought about unprecedented challenges for university education, affecting students, teaching staff, and administrators. This unprecedented crisis revealed emerging vulnerabilities in the traditional education system (Ali, 2020) and necessitated redesigning of the education system (Mishra et al., 2020) towards online learning (Ali, 2020). While it seemed proper and common to abruptly convert traditional education delivery to online learning mode (Crawford et al., 2020), the success of emergency remote teaching (ERT) depends on various elements of coordination and collaboration. Teaching staff (lecturers and tutors) play important roles towards maintaining a positive learning journey, more so in the COVID-19 pandemic during which students have

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additional challenges to overcome for education continuity. Lecturers are the key touch points for students via teaching, and administrative responsibilities. Tutors are also touch points in students' learning journey by performing supportive and facilitative roles to lecturers and students. Yet, university expectations, ideas or operational directions in adapting to the crisis may remain unclear. Teaching staff, like any other employees in the stage of organisational transformation and development, operate to their best knowledge in ambiguity while being expected to use technology and technological gadgets (Ali, 2020).

The aim of this study is to undertake a multi-stakeholder perspective to explore a holistic approach to teaching final-year business students in university during the COVID-19 pandemic. Firstly, the study identified learning challenges faced by final-year business students in an ERT setting, enacted in response to the COVID-19 crisis. Ali (2020) stressed that understanding how different groups cope with learning to minimise negative impact on learning (Crawford et al., 2020) delivers a considerable contribution to literature. The focus on final-year students under the ERT setting is warranted because of additional challenges arising from ERT and COVID-19 crisis (Ali, 2020). Final-year education typically presents learning and task assessments that demand the development of higher order thinking skills and application skills in the real-world setting (Morley & Jamil, 2020). Secondly, ERT requires teaching delivery to go beyond the norm to embrace online pedagogy (Crawford et al., 2020). Therefore, it is crucial to study the changing strategies explored by teaching teams in support of learning journey of business students that are noted to have relatively higher degree of anxieties (Sundarassen et al., 2020). The study design of service provider-receiver of business students also departs from past pandemic literature around university students in general and in the medical faculty. The multi-stakeholder approach enriches literature. Current research has also largely assessed the general role of university educators without considering the different positions of the teaching team. This case study offered a student-teaching team perspective that includes lecturers and tutors given their important roles. In these ways, the research findings provided insights to faculty members to reflect and improve their online learning delivery in the future.

The Case of a Business Education Programme in Malaysia

Past research that contributed to online education in the pandemic crisis covers various countries (Crawford et al., 2020). The context of the current study is final-year business students in an offshore campus of an Australian university in Malaysia that ranks top 100 in the QS World University Rankings. The offshore campus provided a cross-cultural setting for learning with a good spread of international student population, mostly from Indonesia and South Asia. Academic subjects were once adopted from the campuses in Australia and gradually localised to the Malaysian context by academic staff in the Malaysia campus. Permanent academic staff led subjects and conducted lectures. They were supported by tutors who run tutorials for the development of higher order thinking and application skills. Both lecturers and tutors provided consultations as additional interaction space to lectures and tutorials.

In response to COVID-19 crisis, the Malaysian government had announced a nationwide movement control in March 2020 that resembled lockdown in other countries that are troubled by the pandemic. Crawford et al. (2020) reported that universities in Malaysia were mandated to embrace online learning. Similar to some countries (e.g., Bao, 2020; Crawford et al., 2020), many educational institutions in Malaysia were either closed or swiftly converted to online learning mode without any emergency preparedness plan for the pandemic. Educators and students faced numerous challenges (Crawford et al., 2020). During this period, teachers either lacked online teaching experience and support from the institution (Bao, 2020) or had to prepare and train themselves to be accustomed to online teaching delivery (Mishra et al., 2020). Typical observations were pre-recorded lectures replaced physical lectures, tutorials were conducted synchronously via online platforms, and subject designs were revisited.

Research Procedure

This case relied on semi-structured interviews with business course teaching staff and students in their final year of studies. The interview method as a data collection method is suitable to study qualitative psychology (Braun & Clarke, 2006). It enables thematic analysis that is not theoretically bounded by theory. Thematic analysis therefore supported studies to understand the phenomenon in question, in this case, was to understand the novel and different psychological processes of students in the new context of pandemic. Ethics approval from the university to conduct this study was obtained. Since the research may involve students recalling stressful and unpleasant experiences, interviewees were informed of the availability of counselling support and their rights to withdraw from the research anytime. Interview questions included understanding the various learning challenges faced by students and holistic ways that respective teaching staff (lecturers and tutors) helped them to cope. The names used in this chapter are pseudonyms. Fifteen participants were interviewed, twelve students (e.g. Park, Andrew, Hana, Tony, Tania, Aaron, Alex, Rachel, Szehui, Ami, Alia, and Kaylyn) and three teaching staff (Mr Nightz, Dr. Lang, and Dr. Zhou). Five were international students. Four students were pursuing their studies at locations away from their families. Interviews were audio-recorded and transcribed verbatim. The researchers analysed the interview transcripts separately for thematic patterns before meeting to compare empirical findings (Yin, 2018). Confirmed findings were coded and collated to understand the interrelation of sub-themes for the construction of major themes.

Student Perceptions of Academic Challenges and Experiences

The interviews with twelve final-year students to share their perception of academic challenges and experiences revealed interesting findings that not only included the present but also students' concern over their future and market readiness. This study identified three themes of challenges,

namely (1) skill development, (2) mental health, and (3) learning-related infrastructure and environment (see Fig. 43.1).

The first challenge was skill development. Students were concerned that they were not sufficiently learning employability skills to be prepared for the working world. While this is a common worry for final-year

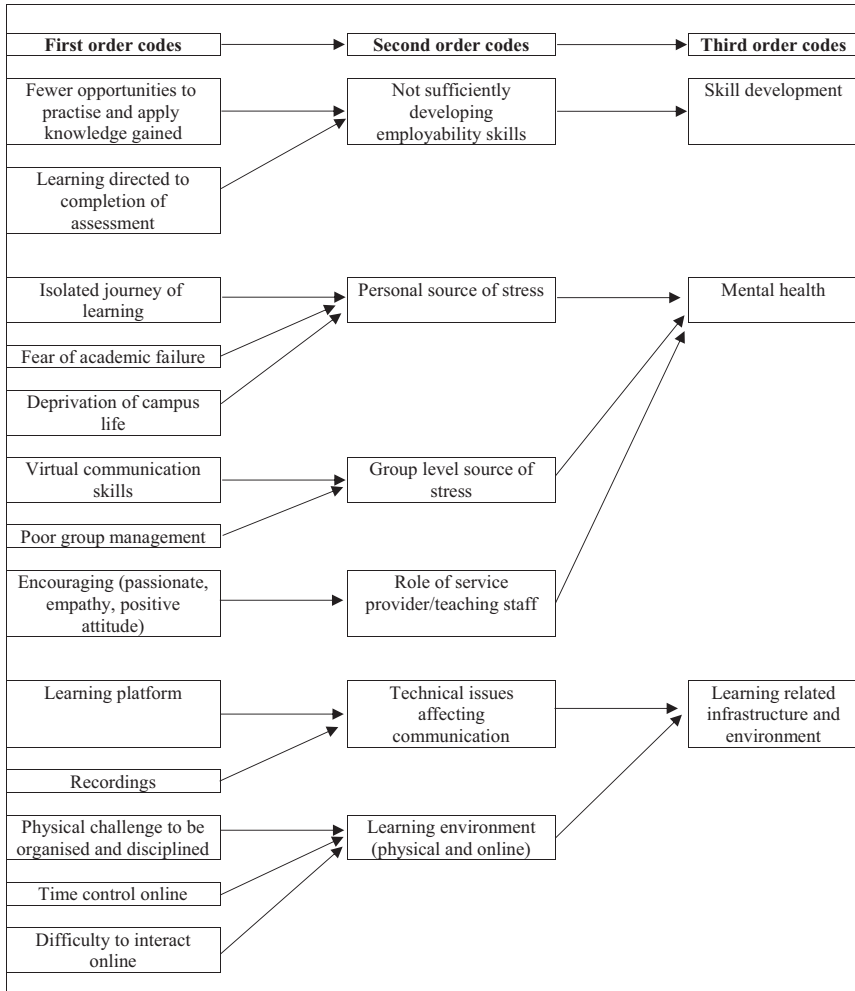


Fig. 43.1 Construction of themes for challenges faced by students

students (Marris, 2018), the concern is amplified by the economic downturn resulting from prolonged lockdown. Student Alex was worried that the lack of interaction with teaching staff and peers as a result of lockdown and ERT meant that he had fewer opportunities to practise and apply knowledge gained. Other than online tutorials, students had to make appointments for online meetings to interact with others. This was very different from the pre-COVID-19 environment whereby students could have physical interaction and drop by offices of teaching staff to gain more learning.

For final-year students ... we have to learn things that are more towards application, rather than theory, because when you go out there, you go for interviews, when you do your work, it is always about applying, doing, and why.

Student Tony admitted that he directed most of his learning to completion of assessments, rather than gaining wider knowledge of the subject. This is owing to the limited two-way interaction and the introduction of pre-recorded lectures. Other students also mentioned difficulties in self-learning of new and advanced statistical and finance software in the final year and that a physical workshop would have been more effective than self-learning.

The second challenge was mental health, which seems to point to different sources of stress, namely personal, group, and service providers. At the personal level, it can be related to the first challenge on skill development concerns because of their isolated journey of learning. Learning in isolated spaces, students expressed high levels of stress due to their fear of academic failure that may force them to delay graduation. Academic failure would have a greater impact on international students who pursue their study in Malaysia. Moreover, staying indoors over a long period makes one feel stranded and deprived of the campus life that they yearned for in a prestigious university. The sudden cut-off from routine socialisation and peer support put students to the test of resilience (Raisanen et al., 2020). This is very true for students who are away from family. International students may also want to do some travelling.

It is different compared to being [physically] in university, in the library... after that we still hang out. We don't really have that right now [during online learning]. (Student Alia)

I was really looking forward to coming back to Malaysia... you know, exploring more, but none of that happened... I was an international student. (Student Hana)

Students' mental health was also aggravated by group-related academic work arising from virtual communication and poor group management. In the Asian culture, face-to-face communication in a physical environment considers the context. The switch to virtual communication with the option to opt out video seems to change the dynamics of group meetings as narrated by Student Ami. Interestingly, the absence of seeing one's face was sensed as a space to be less committed to group work: 'For group work, it is more difficult to get a clear idea of members' attitude and emotion because we don't see their face... So, there are many times... misunderstanding'.

Besides personal and group originated stresses, students also shared their thoughts about teaching staff. The sudden shift to ERT gave very little time and coordination opportunity for subject leaders to revisit learning content, resulting in a high number of assignments scheduled for submissions in the same period that caused students additional stress. Student Szehui notes: 'Online, there are way more assignments... Week 10 or 11 (almost the end of the semester), I have five or six assignments and tests due'.

In this study, the orientation of teaching staff seems to be an important signalling to students of the extent of socio-emotional support that they could expect. Interestingly, students in this study expected teaching staff to play an encouraging role—have passion, empathy in the pandemic, positive attitude, and listening ears. Students' observation of staff orientation could affect their learning motivation. Student Szehui notes: 'Actually [whether] we want to learn because it also depends on the tutor'.

The third challenge was connected to technical issues (i.e. computer, internet, and software) and learning environment. Most challenges identified were connected to the learning platform and recordings. In the new

normal of online learning in isolated space, Student Park felt that the course materials on Moodle were just thrown or dumped at students. Others claimed that the learning platforms for some subjects were messy. Separately, Student Alex commented that lecture and tutorial recordings lacked stimulation and were difficult to pay full attention to. Students often procrastinated viewing recordings that were less stimulating or skipped through them.

The other subtheme for the third challenge was connected to the learning environment—both the physical and online learning environment of the student. Students in this study generally faced the lack of being organised and disciplined to study at home. Student Kaylyn spoke of her home environment conditioning her to be more relaxed, rather than focusing on her studies. Some worked as interns before the semester started and treated home as a place for rest. With online learning, the same space is also used for study and could no longer be symbolically for rest. Separately, there were also other challenges of the online learning environment. Tutors conducted synchronous tutorials via Zoom. However, many students found it difficult to interact with the tutor and peers during online class. Tony admitted that the lack of communication in class (especially by other students) made him reluctant to interact.

Supportive Strategies by Teaching Team for Students

The university in this study in its multi-pronged strategies, instructed some standard changes to embrace online learning mode of delivery. Besides the typical strategy for pre-recorded lectures and online tutorials, teaching staff were encouraged to conduct online workshops driven by active learning to support application skill development of students. Mid-semester break was extended from one week to two weeks to give students more time to manage their studies. Subject leaders adjusted the teaching schedule, revisited the learning content, and changed the nature of assessments.

Teaching staff (lecturers and tutors) played a critical role to support students in their learning journey. In addition to the university-wide approaches, the teaching team initiated additional supportive strategies at team and individual levels to help students in coping with their studies in the new normal. The emerging themes that represent supportive strategies that also act as coping mechanisms for students are (1) empathy, (2) role extension, and (3) personalisation (see Fig. 43.2).

The first major theme was empathy that refers to the various kind actions observed and narrated by students in this study around three sub-themes, namely time, expectation, and exceptional support. Students expressed their appreciation that the teaching team had been flexible with extension of time for assignments and oral presentation. Interestingly, the time extension has an emotional element—calmness in students.

Usually the criteria is that you cannot go over twenty minutes [for presenting]... However, we faced technical difficulties [during the presentation]. He understood and did not restrict us to twenty minutes. He gave us plus-minus ten minutes, which led us to be more composed to present.
(Student Rachel)

Students indicated in the interviews of their increased expectation for assignment clarity. They appreciated that their expectations were positively responded to by a teaching team with wide flexibility from assignment due dates to selection of case study, as well as empowerment in the deployment of analytical tools to complete assignments. Students experienced more empowerment in curating their own learning journey. Interestingly, students perceived as depriving students of physical meetings in the campus viewed the additional guidance as compensation for the adoption of ERT mode.

Courses also give a lot of flexibility, they tell you that you can choose whatever company you want, you can talk about it in different ways, and there are a lot of tools that you can select without normal restrictions.
(Student Alex)

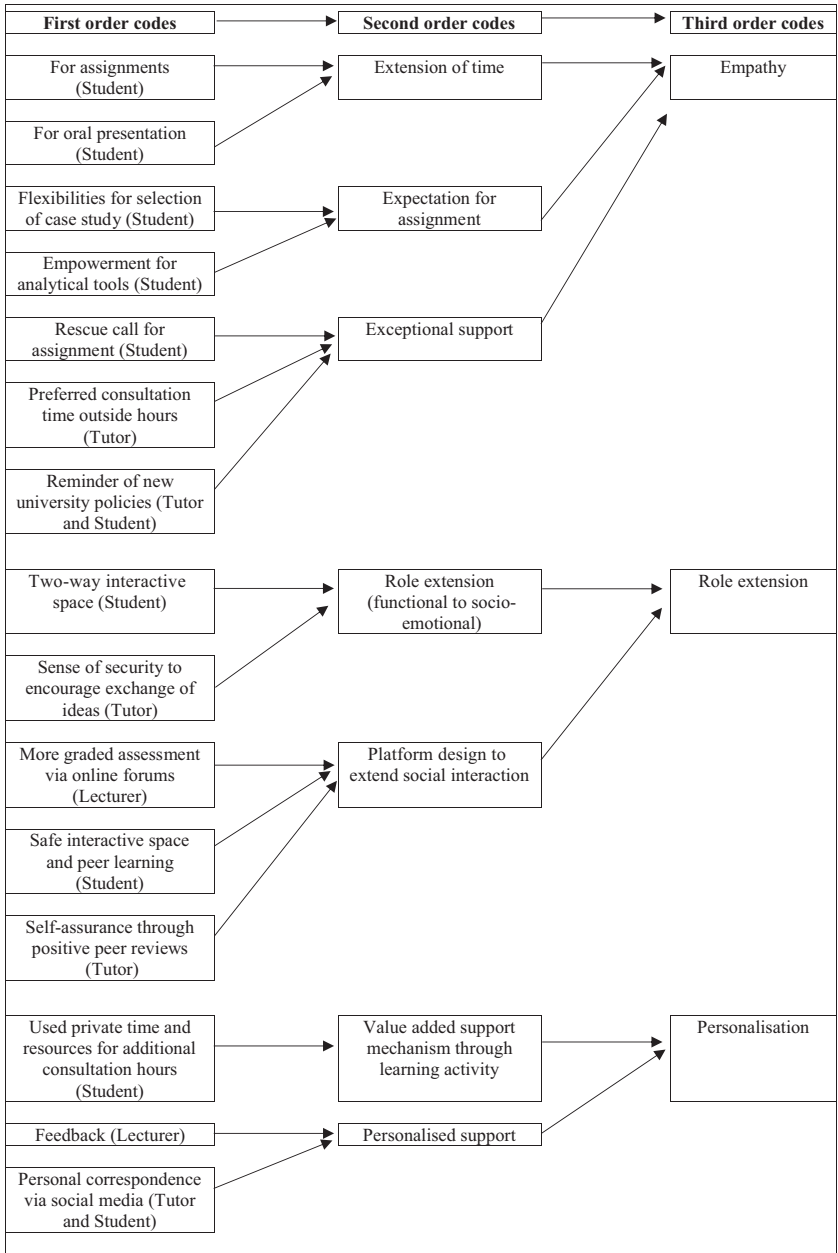


Fig. 43.2 Construction of themes for supportive strategies by teaching team to students

In addition to time and expectation, empathy was also perceived by students who had received exceptional support. For instance, one student (Student Ami) noted that her tutor in a unit responded to her rescue call when she had difficulty, 'So I contacted my tutor about it ... he helped us to find the staff (in the organisation) for acquisition of information to help with the report (assignment)'.

Dr Lang, a teaching staff, noted that he had exceptionally accommodated the preferred consultation time in the late evening among international students despite working outside office hours. In addition, Dr Lang repeatedly reminded students to check emails on new university policies on fail grade during COVID-19: 'So, many of them are relieved, when I tell them about it (new university policy on fail grade), like around assignment peak period'. The relief claim was also supported by student narratives. For instance, Student Tania notes: 'So your failed grades would not be recorded or affect your CGPA. That was helpful for most of the students that were very stressed out'.

The second major theme was role extension of the teaching team from the functional role to the socio-emotional role, which was crucial for supporting students' learning preference in times of pandemic. The virtual classroom space for tutorials posed limitations in replicating the interactive learning experience (Lockyen et al., 2016). While there are students like Student Alex who appreciated real-time moments that feature two-way interactive communication (e.g. listening to students' voices, online discussion), Tutor Dr. Lang also recognised the limitation of tutorial and consultation in the ERT mode as well as student preference for social interaction between teachers and students. Therefore, Tutor Dr Lang deviated from university guidelines and chose not to record his tutorial sessions. He hoped to impart a sense of security among students and encouraged them to express and exchange any ideas during online classes. Unexpectedly, he had come across students who opened up about their family issues and personal experiences that he tried to provide emotional support.

The emerging themes and narratives point to the importance of platform design in its limitations as well as the necessity for it to play additional role if the new normal of online learning delivery were to stay—the supportive role for learning that extends to social interaction. Besides

tutorials, teaching staff designed alternative means for learning that also addressed social needs. Asians are noted to be highly concerned about academic performance and channelled their resources to gradable assessments. In contrast, a few students approached Lecturer Dr. Zhou to hold more graded assessments via online interactive space because they enjoyed the initial interactive experience. Despite requiring good real-time performance to score well, students realised the interactive nature addressed their much-needed social interaction and learning stimulation that were currently lacking in the ERT mode and off-campus university life: 'I was very surprised with such feedback about the assessment that is based on participation and demonstration of critical thinking skills. Some students who are quiet or shy may find such assessment intimidating' (Lecturer Dr. Zhou).

Student narratives in this study revealed that students simultaneously desire a safe interactive space of peer learning in the ERT mode of delivery and a safe space that embraces honest social interaction (e.g. constructive feedback, exchange of ideas). Some students in this study (e.g. Students Alex, Tony, Hana) noted that non-graded online forums (e.g. Discord) not only allowed them to keep their anonymity, but also interestingly 'freed them up' for real interaction and discussion. Such designs have seen active student participation in peer learning: 'We can interact with our classmates ... they can question you, criticise you, and you can still learn ... the learning journey ... people will start to explore. ... I actually really appreciate that we are given the opportunity to speak our thoughts without being penalized or censored' (Student Alex). Another noted: 'You are exposed to their way of thinking, so that is another learning way for a silent learner, I typed so many responses. ... It was the best interaction' (Student Tony).

Besides the functional role of peer learning of online forums, the combined designs extended the role of learning platform to one of social support that benefits students in peer interaction and self-assurance. One way this had happened was when they received positive peer reviews towards their postings. Tutor Dr. Lang received positive feedback for this initiative: 'Some students told me they liked the forum [participation] ... they can see other people's work ... feel good about what they [themselves] wrote'.

The third major theme was personalisation that is formed by sub-themes relating to value-added support mechanisms (i.e. learning activity and personal support). Embracing the ERT mode of delivery, regular lectures in physical settings were cancelled due to lockdown and replaced with pre-recorded lectures. While a sudden shift to pre-recorded lectures provides students with the flexibility to access learning materials anytime, some teaching staff were compelled to provide alternative support for third-year students. They held workshops with active-learning content and interactive opportunities that added value to the intended learning in the pre-recorded lectures.

They may wish to seek confirmation of their own understanding or interpretation... enable students to examine if their application skills are on the right track, put self-doubt aside. It is a kind of reassurance. (Lecturer Dr Zhou)

Teaching staff including part-time tutors that have had personal conviction also used their private time and resources to provide additional consultation hours beyond office hours. The absence of extra compensation did not deter part-time tutors from supporting students. The supportive strategy that gave students more flexibility to seek assistance concurred with students' narrations. For instance:

The consultation hours were longer and more frequent... This helps because there were some days which I cannot go at all because of my classes... I think some of them (tutors) even did consultation after working hours. (Student Park)

Personalised support was also provided by a few teaching staff in this study in the form of personalised feedback during tutorials or consultation sessions. The feedback session on oral presentations and draft work was recorded and shared with relevant groups of students for post-tutorial revision. Tutors tended to have more interaction with their students than the subject leader (lecturer). Tutors would have known their students through weekly activities and identified those in need of help. Student Tania shared about her friend who received assistance.

Some of my friends that were struggling were advised [by this tutor] to take break... I deeply appreciated his honest feedback... I trusted and respected him more for being honest. (Student Tania)

Tutors also personalised support for their students by extending their personal contact details to enable students to communicate via social media platforms for quick assistance. Such personal extension was regardless of job function to include support for students with socio-emotional challenges about difficulties of life. Mr Nightz, a part-time tutor explained: ‘The way is we as tutors need to know their voices, if they are telling you stories, please be willing to listen to them, spend time with them... I spend some time, I sit down with students, have the conversation, let her talk about her experience, what is going on with her, and is there anything I can assist her... She felt way better’. Student Alia preferred communicating via social media: ‘WhatsApp is so much easier than writing an email. Sometimes it is harder to articulate things formally, unlike WhatsApp’. A participant (Student Ami) expressed the perceived suitability of tutors in counselling:

Counsellors don't see you every day. Tutors see you every day of the semester, so they know you better than the counsellors and they probably know your circumstances throughout the semester. So, they can give you a bit of mental support. ... Last year I had one tutor who gave me a pat on the back (verbal encouragement) because I was really stressed and we stayed back after the (online) class and I feel so much refreshed. ... Sometimes, all we need is a bit of encouragement. (Student Ami)

Scholarship on Long-term Impacts

This multi-stakeholder study that explored a holistic approach to teaching final-year students by capturing learning experiences of final-year students and the multi-pronged strategies by educators (lecturers and tutors) reveal practical implications that call for teaching reflection. At the university level, standard strategies such as online mode of delivery and pre-recorded lectures were generally set as the main direction to enable

teaching in times of pandemic. This finding is consistent with recent studies (Bao, 2020; Crawford et al., 2020). Teaching staff was empowered to re-design subjects and initiate support mechanisms that suit their subjects and needs of students.

The 'displacement' resulting from the pandemic left students in this study with various challenges during their study period as well as future endeavours. Emerging themes from the student perspective are skill development, mental health, and learning-related infrastructure and environment. Further examination of student narrations implies that multiple sources of stress arising from individual, group, and infrastructure levels may have impacted mental health of students. Consistent with the lack of learning effectiveness by Bao (2020), there was a lack of independent learning skills in isolated contexts and project management skills for group work in the online space. Some students in this study could have been selective in channelling their learning commitment to securing good assessment results over the importance of mastering additional employability skills.

More importantly, the study revealed that a favourable online learning environment extended roles of online learning platforms from a functional that was predominantly teaching-focused to a safe interactive space for students to address their social-emotional needs. The innovative use of online tools by educators as a sharing space beyond intellectual discussion enabled students to have listening ears. Students learned how others were struggling to realise that they were not alone and learned to cope in physically isolated learning context so as to manage their own mental health.

Besides innovation in learning infrastructure, the study revealed that empathy was crucial to cultivate resilience and a positive learning journey for students. It took just a little flexibility (e.g. assignment, consultation time, types of support) and empowerment to show students that teaching staff were there for them, and encouraging them in their learning journey. Stepping out of one's functional role, educators also assumed an extra supportive role for the sake of students' well-being despite consuming one's personal space and resources. Since domestic and international students faced different challenges, teaching staff in this study also

personalised their support to add value to students' learning experience and mental health in their physically isolated learning struggle.

Toquero (2020) recommends education institutions to document the impact of the pandemic to their educational system, in order to strengthen curriculum and be more responsive to different students' learning needs. This research provided pioneer operational evidence and practical implications for teaching faculty to reflect and improve online learning delivery in the future. Firstly, the mental health of students is an element that teaching staff must pay close attention to if we wished to support students' learning journey. If students can better manage stress, they can approach their independent study during ERT more effectively. Although the internet may be flooded with many self-help solutions, students may not necessarily find good materials to embrace coping strategies. University may run mental health workshops to educate students how to embrace the new normal in life and study at their personal level. Moreover, workshops organised by the university would have to account for the diverse context of students and campus.

Secondly, there is a need to re-examine the role of educators. Teaching staff may increasingly come across students who experience pandemic fatigue that affects their mental health. The supportive strategies found in this study that are beyond one's typical responsibilities are exemplary to keep students sane and performing during the COVID-19 crisis. In contrast to the time-bound relevance of online teaching (Mishra et al., 2020), the supportive strategies are responses to the new phenomenon of approachability that places irrelevance to time-bound learning contact in the online space and pandemic. Many of these supportive strategies are self-initiated by teaching staff, volunteered and driven by their professionalism, care, and passion. Teaching staff were flexible and willing to sacrifice their personal time and resources for the well-being of students. Yet, such extraordinary supportive strategies may not be widespread at an institutional level.

While universities can organise mental health and well-being workshops for students, the mental health issue of students seems closer than ever for teaching staff to manage that such extended role may become necessary. It may no longer be sufficient to advise students to seek professional counselling. After all, students may feel comfortable to seek early

help from teaching staff that they are familiar with. Since students are likely to seek tutors for help in personal struggles, the university may explore workshops to groom selected tutors to acquire some counselling skills.

In the swift transition to ERT, universities need to examine how it can empower teaching staff to continue extraordinary support. For instance, train staff with skills to identify vulnerable students to get them early assistance. This is because teaching staff were not trained or certified counsellors. In addition, universities could also train staff to respond to students facing stress by suggesting some stress reduction strategies (e.g. sports, connecting with others, healthy lifestyle, etc.). Universities can also examine the existing resources, compensation structure, and developmental opportunities to look after the welfare of teaching staff. Resources can cover home WIFI expenses and fair pay for work contributed. Teaching excellence awards should be open to part-time tutors as a form of reward and motivation for their collaboration in delivery of high education quality.

Thirdly, project management workshops can be conducted to impart skills and knowledge to help students have productive and pleasant group experience, thereby reducing the stress at group level. Teaching staff in this study had been alerted on the rise of free-rider issues for group assessments in ERT. According to Tutor Mr. Nightz, students attempted different ways to get group participation to no avail. Rush work has led to poor quality of group assignment. Dr Lang noted that, in an online space, team members may not have communicated with other team members who were not responsive: 'On campus, the students will find a way to eventually get hold of them (free-riders)'. Monitoring of group work can be done in an organised and friendly manner. Workshops on communication skills are also important as the way senders convey messages (e.g. oral, text) affects not only the intended receiver but also other team members in the same online space. Poor communication skills can affect group work and motivation. Non-responsive team members could be facing some personal challenges in life. Hence, empathy in communication may help non-responsive team members to respond, thereby a step closer to reducing free rider issues.

Lastly, since ERT in March 2020, three semesters were completed. The university may remind faculty leaders to monitor and repeat the coordination practice meant to avoid overloading students with assignments in any specific period. Providing teachers with adequate training can assist them to effectively undertake online teaching delivery (Toquero, 2020). The university may also provide workshops and training to better equip teaching staff with digital skills that can help to reduce workload and enhance work efficiency.

Conclusion

This study undertook a multi-stakeholder perspective to explore a holistic approach to teaching final-year university business students during COVID-19 pandemic. Previous research largely assessed the general role of university educators without considering different positions of the teaching team. This research examined the different approaches taken by lecturers and tutors. This study found that students were concerned about various employability skills and were negatively affected by a multi-source of stress (e.g. personal, group, educator, home and online environment). Favourable online learning infrastructure extended the roles of online learning platforms from functional to address students' social-emotional needs, such as loneliness, interaction, and self-worth. Tutors also supported the mental health of students. Multi-pronged strategies entailed an innovative extension of functional to socio-economic roles. Functional roles include having variety and design of interaction platforms, value-added materials, and personalised support. Socio-emotional roles are embodied in empathy beyond emotional support, such as time flexibility, expectations of assessments, extra teacher-university support. These strategies cultivate student resilience and a positive learning journey for them.

This research is based on interviews with lecturers and tutors. Future studies in this area may consider the views of university administration and support staff (e.g. counsellors, career advisors, librarians). These departments provide important effort that enhance students' learning journey and support teaching staff to do likewise. Separately, this study

involved students in the business school. Previous literature focused on university students in general or those in the medical faculty. Future studies may consider specifically examining students from other faculties and also postgraduate students. These students may face unique challenges. Engineering students require special equipment and laboratories. Research postgraduates have different peer support challenges, since they have a smaller group of peers, as compared to undergraduates.

References

- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3), 16–25.
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behaviour & Emerging Technologies*, 2, 113–115.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P. A., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 9–28.
- Lockyen, L., Patterson, J., Rowland, G., & Hearne, D. (2016). Online mentoring and peer support: Using learning technologies to facilitate entry into a community of practice. *Research in Learning Technology*, 10(1), 24–31.
- Marris, P. (2018). *The experience of higher education* (Vol. 17). Routledge.
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012.
- Morley, D., & Jamil, M. G. (2020). *Applied pedagogies in higher education—Real world learning and innovation across the curriculum*. Palgrave Macmillan Ltd.
- Raisanen, M., Postareff, L., Mattsson, M., & Lindblom-Ylänne, S. (2020). Study-related exhaustion: First year students' use of self-regulation of learning and peer learning and perceived value of peer support. *Active Learning in Higher Education*, 21(3), 173–188.

- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., Hossain, S. F. A., & Sukayt, A. (2020). Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, *17*(6206), 1–13.
- Toquero, C. M. (2020). Challenges and opportunities for higher education amid the COVID-19 pandemic: The Philippine context. *Pedagogical Research*, *5*(4), em0063.
- Yin, R. (2018). *Case study research: Design and methods*. SAGE.



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Skills Immersion Project: A Framework to Support Students' Learning in the Remote Learning Environment

Leanne C. McCann and Mehri Bagheri

Introduction

The COVID-19 pandemic has fast-tracked the shift from the traditional modes of teaching and learning to remote instruction in unprecedented ways. Students and teachers across the world have been urged to adapt to a learning environment which in many ways is radically different from what they had experienced and were familiar with before. Unlike other crises and disasters, the COVID-19 pandemic came with catastrophic impact and an unknown conclusion, requiring immediate and ongoing change to teaching and learning. According to Neuwirth et al. (2021) an opportunity to revision the curriculum coupled with addressing the new demands students face studying both asynchronously and synchronously and at home rather than educational environments. This has created numerous challenges for the educators to accommodate students' learning needs and ensure that everyone receives the support that they require.

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The RMIT University Library—Learning, Education Portfolio adopted agile methodologies to support students across the ebbs and flows of the academic calendar. The student learning team transitioned to online support services and adopted the Skills Immersion model to support students' engagement and progression in their studies (Willison et al., 2010). The aim of the support was enabling students to have a seamless access to research and learning support and e-resources regardless of where they were located globally. Online and alternative approaches to supporting students studying in Nepal highlighted risks students with limited ICT skills faced with the new mode of learning (Paudel, 2021). The Skills Immersion model collated appropriate resources in the Canvas LMS to help students feel prepared for online learning and confident to actively engage in online communication and collaboration (<https://emedia.rmit.edu.au/learninglab/content/online-learning-skills>).

At the core of this project was a collaboration between the discipline academics and the student learning experts to gain insights into the nature of the support required by the students. The impacts of the COVID-19 pandemic have required higher education to provide flexible and resilient education systems to support students' online engagement which 'requires thought, coordination, and careful decision-making' (Ali, 2020).

COVID-19 required focussed consideration and support for student mental health, equity, and cultural constructs. As global restrictions, and economic and environmental impact, students have limited access to health and wellbeing resources and services (Pownall et al., 2021).

The Skills Immersion Project

The Skills Immersion Project (SIP) is a study support model which has been designed by student learning experts at RMIT University Library—Learning, Education Portfolio. SIP brings together tailored and timely academic skills development to build student confidence and capability for successful engagement that is proactive, embedded, and a sustainable methodology. This program is informed by university policy, student learning feedback, data analytics, and collaboration with colleagues to

create an inclusive, respectful, and empowering suite of support services, resources, and learning spaces. The specific areas of expertise of the program are research and academic writing, academic integrity, English language, and STEM subjects. Specialist staff support students through embedding academic skills development, scaffolded across courses from early in the semester.

The impact on student engagement and success has been a significant motivator for the design and implementation of SIP. Studies have shown academic success has a fundamental role in raising students' self-esteem and perseverance in higher education. It has been indicated that poor academic performance can result in increased rates of attrition and increased costs of education (Jayanthi et al., 2014). In traditional face-to-face teaching environments, students had more opportunities to interact with the lecturers and other students and obtain immediate feedback regarding their performance and concepts that they do not understand. This type of immediate feedback and support can be limited in the context of COVID-19 where most of the teaching and learning activities occur online. The lack of student to teacher and student to student interaction can increase student vulnerability and results in feelings of isolation.

Another motivator for implementing SIP was making the study support services more proactive and agile in nature. Traditionally our study support services were provided to the students through face-to-face consultations or ad-hoc in-class workshops. For the consultations, students who needed support reached out to the study support staff during scheduled drop-in times. One challenge was that this mode of support could only accommodate a limited number of students. Furthermore, students who were not on campus could not benefit from this service. Also, this type of support was reactive and targeted students when they encountered a problem in their studies, and more importantly many students did not consult the study support staff because they were either not aware of the service or not willing to ask for help. Research has shown that help seeking when encountering ambiguity or difficulty in schoolwork is a critical self-regulatory strategy that contributes to students' learning (Karabenick & Newman, 2009). However, many students do not actively ask for study help when faced with academic difficulties in their studies

(Ryan et al., 2005). Therefore, a more proactive system that is inclusive and accessible to all students is essential. The importance of being proactive and the adoption of appropriate and in-time intervention are more evident in the context of COVID-19 where most of the on-campus support services are not available (Tabari & Amini, 2020).

One of the modes of providing academic skills and research skills is embedded in-class workshops. The embedded workshops are aligned to the course requirements, and cover areas including assignment structure, academic writing, academic integrity, and research. Before COVID-19, the embedded workshops had a reactive and ad-hoc nature because they were requested after teachers encountered low student academic performance in specific areas. In these situations, they contacted the study support team and requested a workshop that was plugged into the course requirements and conducted in class. This type of support had similar drawbacks in that it was mainly based on the teachers' perception of their students' performance and need, therefore, it did not necessarily target all the students who needed the support. According to Crowther et al. (2001), the role of study support staff should not be limited to a reactive solution-maker, instead this role should entail an ongoing review of the teaching and learning to identify the academic gaps and provide timely and inclusive support.

The reactive and ad-hoc use of the study support services, and the fact that it did not have an inclusive and sustainable nature, motivated the design and implementation of the Skills Immersion Project. This study was conducted to implement the Skills Immersion model for one undergraduate cohort at the School of Management within the College of Business and Law at RMIT University.

Academic Integrity

One of the areas of academic development that is essential for students' success at university is academic integrity. Academic integrity is the honest presentation of academic work by referencing the work of others while developing own insights, knowledge, and ideas. Breaches of academic integrity include cheating in exams, plagiarism (either intentional or

accidental), collusion, and contract cheating. Analysis of academic misconduct in US and Australian universities identified that a substantial number of international students do not comprehend the standards of expected academic behavior nor understand what constitutes breaches of academic integrity (Jordan & Belkin, 2016; Brown et al., 2018). Research on US universities have shown that international students are twice as likely to conduct academic misconduct than students from the domestic cohort (Fass-Holmes, 2017; Frost & Hamlin, 2015). Similar findings have been reported from Australian universities by Brown et al. (2018) who concluded that international students were found to have a greater tendency to engage in dishonest behaviors particularly on research assignments. This can have several reasons including English language barriers, cultural understandings, study pressure, family pressure, and a lack of familiarity with academic integrity principles of Western universities. This type of cultural conditioning, research shows, is more prevalent among students coming from the Asia-Pacific region because they come from a collectivist educational system and have more difficulties adjusting to the Western system of academic integrity (Beasley, 2016; Velliaris & Breen, 2016). A similar concern was reported when the lecturer of the selected cohort reported instances of academic misconduct in the previous student cohorts. The lecturer also expressed concerns about students' underdeveloped skills in areas such as paraphrasing and referencing which are critical to academic success.

Contextual Background

RMIT University is a large and complex dual sector university located in the CBD of Melbourne, Australia. RMIT University is one of Australia's top five universities for international exchange with campuses in Melbourne and Vietnam, 200-plus exchange partner institutions, and industry connections across Europe, Asia, and North America. The international student market represented approximately 40% of student cohorts at RMIT University. The College of Business and Law is one of the largest business schools in the Asia-Pacific region with six schools across Australia, Vietnam, Singapore, China, and Indonesia. This college

has attracted more than 31,000 students worldwide and many of them are directly affected and severely impacted by the COVID-19 pandemic.

In March 2020, when the catastrophe of the COVID-19 global pandemic emerged, universities were required to quickly adapt to providing university teaching and learning online. Unprecedented national travel restrictions and major lockdowns in the city of Melbourne had a negative impact on students who were stranded and either unable to travel home or unable to return to Australia. The university's priority was to transition to online delivery offering innovative and accessible pedagogy globally. RMIT University leadership had taken action to remove exams and to implement assessment tasks, increasing the demand for Library Study Support services, including English and academic writing, academic integrity, research literacy, and STEM subjects. The challenge of remote locations, time zones, and internet access exacerbated the challenges for students to continue their higher education. Access to online chat services was extended to include the broader service offerings of specialist staff in language, research, and numeracy, with additional expertise in academic integrity and cultural inclusion, learning preferences, and diverse learning abilities.

As COVID-19 impacted the higher education sector, students were unable to access on-campus face-to-face study support. With high student concerns and cases of academic integrity breaches, it was decided to focus our case study on supporting students remotely in educative support on academic integrity. To reach the global community of RMIT students, a pedagogical model, Skills Immersion, was created to be inclusive, accessible, and sustainable. Working with discipline academics, the professional library student learning specialists designed workshops and webinars embedded in the Canvas LMS with tailored digital resources to support the student engagement aligned to the curriculum architecture.

The Study

This study aims to measure the impact of the Skills Immersion model on a group of undergraduate students at the School of Management within the College of Business and Law at RMIT University during COVID-19.

Several data sources including Business Intelligence, a detailed audit of the course structure and content, and feedback from the lecturer informed the design of the support services and resources. Post intervention, a student survey and an interview with the lecturer were conducted to measure the impact of the Skills Immersion model.

The Skills Immersion model is aligned to RMIT University policy to provide open education resources (OERs) and equity and inclusion for all. SIP is informed by scholarly research and professional practice and seeks to measure the value and impact of implementing embedded study support for students across cohorts and disciplines globally. Data was collected from Business Intelligence dashboards to inform cohort diversity and risk profiles, and evaluation surveys to establish if students believed the tailored and embedded study support services and resources made them more confident and capable in their discipline studies.

COVID-19 required agility to maintain student engagement and the methodology was informed by the activities undertaken by the study support staff and partnership with professional academics. The methodology undertaken was considered reliable to meet the objectives of the Skills Immersion model and the mode of implementation via Canvas LMS that provides broad accessibility across time zones globally.

The SIP pre- and post-comparative data and findings will be reported to RMIT Academic Board with a proposal to extend embedded study support and to add question/s in the annual Student Satisfaction survey to measure impact. Longitudinal studies will be undertaken across college coursework programs. Further contributions to scholarly research will be undertaken to ensure best practice for all students learning remotely.

Methodology

Participants

The criteria for selecting the participants required them to be enrolled students in the College of Business and Law at RMIT University Australia. The reason for selecting the College of Business and Law was that this college has the biggest international student body within RMIT

University. The international students are a particularly vulnerable cohort since research has shown that these students, particularly the ones coming from the Asia-Pacific region, have more difficulties adjusting to the academic English and integrity requirement of Western universities (Beasley, 2016; Velliariis & Breen, 2016). This situation was heightened because many of those students were unable to return to Australia due to the COVID-19 situation and had limited access to the university study support services.

The workshops that were designed and delivered as part of the SIP were embedded into the students' academic curriculum and students were not required to allocate separate hours to participate in them. The workshops recordings, as well as other digital resources, were made available to the students through their course Canvas shell. Participation in the survey was voluntary and students indicated their consent to participate by deciding whether or not to complete the survey. In total, 45 participants, consisting of both international and local students, participated in the workshops and 40 of them completed the survey.

Data Collection and Analysis

The design of the data collection and evaluation methodology was informed by the Library Study Support KPIs. Library Learning KPIs include adopting systematic engagement with colleges, aligning to the university requirements, and increasing impact on students' confidence and capability across coursework programs.

The aim was to build confidence and capability through a proactive, inclusive, and accessible suite of academic skills development services and resources embedded within the curriculum, using a three-phase mixed method approach.

Phase 1 involved collecting data on students' demography and academic performance using Business Intelligence (BI). RMIT BI provides live detailed data on all course and student demography and 'at risk' profiles (see Appendix 1). Phase 1 also involved a detailed audit of the course structure and content to identify the type of skills that students were required to gain proficiency and the level of skill they needed to be

successful. In addition to BI and the audit of the course, the researchers relied on lecturer's experience with the student cohort and their perception of students' skills gaps.

Phase 2 used the data obtained from phase 1 to design and deliver study support that targeted the students' skills gaps including embedded workshops, one-on-one e-consultations with the Academic Skills Advisors and/or Librarians, and digital learning resources in the Canvas LMS. The collected data obtained from phase 1 identified academic integrity as an academic area that warranted immediate support. An embedded workshop was designed with the purpose of introducing academic integrity, highlighting the university expectations and student responsibilities in relation to academic integrity, outlining the breaches of academic integrity and teaching the skills that ensure students maintain academic integrity including paraphrasing, quoting, and referencing skills. The workshop also pointed to the available study support services such as one-on-one e-consultations with Academic Skills Advisors, Librarians, and Peer Mentors, as well as the digital resources. The workshop was delivered through Canvas Collaborate Ultra for three tutorial groups and the recording was uploaded to their Canvas course for students' future reference.

Phase 3 comprised a quantitative online survey of the students to measure their level of confidence in the skills required for academic integrity after receiving the support. The survey was distributed among the students two weeks after the workshop delivery, and it had four items that measured the level of the student confidence in each of the skills taught in the workshop (see Appendix 2). The last item of the survey asked the students to reflect on (Procter, 2020) whether or not the workshop helped them do better in dealing with the academic integrity aspect of their assessment tasks. Phase 3 also involved an interview of the lecturer to gain insight into how the support impacted the students learning from the teacher's perspective.

Ethical Considerations

Participation in the survey was voluntary for the participants and each participant indicated their consent/lack of consent by deciding whether or not they complete the survey. Students were assured that the nature of

their responses and their decision to complete or not complete the survey would not affect their relationship with their tutors/lectures/course coordinator.

In reporting the survey and/or interview data, we addressed ‘the question of anonymity insofar as it applies to persons other than the primary researchers’ as well as ‘balancing two competing priorities: maximising protection of participants’ identities and maintaining the value and integrity of the data’ (Saunders et al., 2015, p. 617; Surmiak, 2018). We took the default position of disguising the personal identities of the participants, anonymizing each individual student. This was achieved through assuring participants that their personal details would not be disclosed.

Results

Data collected in phase 1 demonstrated that approximately 60% of the students in the piloted cohort were international students. This raised the question of how familiar they were with the academic integrity rules and regulations of an Australian university (Jordan & Belkin, 2016; Brown et al., 2018). Further data obtained from the lecturer and the course skills audits confirmed that academic integrity is an area that students needed to further develop context and understanding, and these insights informed the design of the academic integrity workshop. By looking at the data, we decided that a targeted workshop should outline an introduction to academic integrity, highlight the expectations of Australian universities to raise students’ awareness and teach skills that help students do their research and writing with integrity. Such skills include paraphrasing, quoting, and Harvard referencing style which is the main referencing style used at the College of Business and Law at RMIT University. The workshop was delivered for three tutorial groups via Collaborate Ultra which is accessible through Canvas LMS. The duration of the workshops was 50 minutes with 10 minutes extra time at the end for questions.

Two weeks after the workshop, the participants were asked to complete the workshop evaluation survey. The reason for the two-week gap was that the researchers were interested to find out how the workshop

impacted the students' performance in their second assessment task. In the workshop evaluation survey, 70% of the participants reported that the workshop helped them do better in their assessment task. In the follow-up interview with the academic, it was confirmed that the workshops had a positive impact on students observing the principles of academic integrity and avoiding plagiarism in their assessment task. In addition, the average level of confidence in individual skills, including paraphrasing, quoting, and Harvard referencing style, was reported to be 3.45, 3.5, and 3.58 out of 4 respectively.

The interview with the lecturer indicated that the workshops had a positive impact on students' learning because they raised the awareness of the academic integrity requirements of their assessment tasks. In responding to the question of 'How did the workshops help the students improve their academic integrity, paraphrasing, quoting, and referencing skills in the context of COVID-19?' the lecturer asserted that 'workshops created an awareness and helped send a strong message to the students to please take academic integrity seriously'. He further outlined that 'the majority of students submitted better quality assignments after attending the workshops and there were only a few minor occurrences of academic misconduct which was an improvement compared to the first assignment'.

The other two questions in the interview inquired about the impact of COVID-19 on accessing study support and whether the workshops had a positive impact on raising students' awareness and improving their access. According to the lecturer, in addition to raising students' awareness about the expectations of academic integrity at RMIT University, the workshops helped students better navigate the range of available study support services:

With the sudden shift from being on-campus to studying online, many students lost contact with their teachers, peers, and university services. A lot of students had no clue where to go if they experience any difficulties in their studies. This was daunting for the teaching staff as well, and many found it impossible to support big cohorts of students. The workshops clearly outlined the range of available support and sent a message to the students that support is available whenever they need it.

The lecturer further added that the significance of accessing the study support services is more evident in the context of COVID-19 where many felt under a lot of pressure to adapt to the changing nature of their university life.

Discussion and Conclusion

With the immediacy of change caused by the COVID-19 global pandemic, educators were required to pivot traditional curriculum to digital pedagogy. During the turmoil and uncertainty of this time, some students opted to intermit, and the university was faced with fewer enrolments and reduced university staff numbers. The higher education sector was in a state of flux. These unprecedented conditions required urgent change in the higher education sector to provide quality education and research with consideration to a breadth of issues that both staff and students were facing. The Skills Immersion Project case study provided the opportunity to create academic integrity support that was made accessible to the RMIT College of Business and Law students. Skills Immersion is designed to deliver proactive and embedded access to study support for all students. Being informed by the cohort demographics and in liaison with the lecturers, the student learning specialists tailor the embedded academic integrity workshops and resources to the course assessment and requirements.

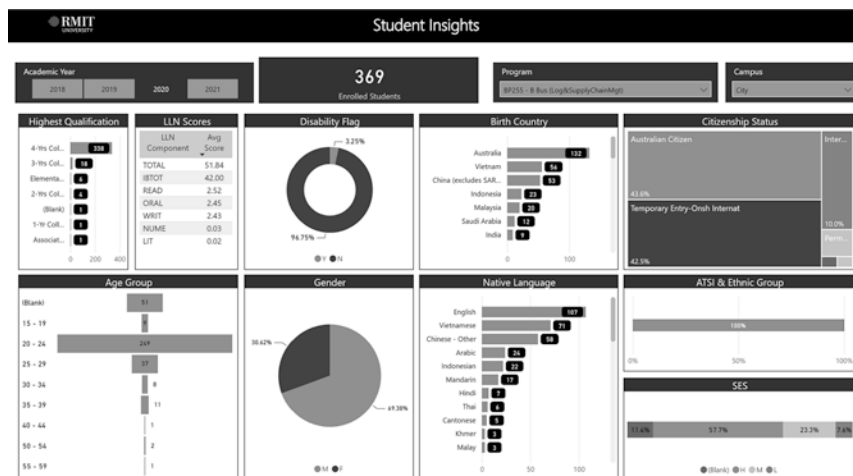
The results of this case study revealed that from the selected cohort, 60% were international students. Studies have shown that international students, particularly students coming from the Asia-Pacific regions, have more difficulties adapting to the academic integrity standards of Western universities (Jordan & Belkin, 2016; Brown et al., 2018). In the present study, a similar concern about students' lack of familiarity with the aspects of academic integrity was reported by the academic. Further results obtained from the post-workshop student survey indicated that 70% of the participating student groups felt more capable and performed better in the academic integrity component of their assessment tasks. This was a promising outcome which was confirmed in the follow-up interview with the lecturer. These findings show the importance of being proactive

in supporting students and are consistent with the findings that proactivity in teaching and supporting students has a positive impact on student empowerment and academic performance (Denti, 2012). The students also reported a high level of confidence in individual skills taught at the workshops including paraphrasing, quoting, and Harvard referencing style.

We have learned from this study that Skills Immersion has the capability to be proactive, transferable, and sustainable across courses and disciplines and aligns to compliance frameworks. This is a priority when students lose access to traditional study support services. Implementation of the Skills Immersion model is a systematic and sustainable approach, underpinned with strategies to enable all students to engage successfully with their studies. The time-efficient collaboration between the discipline academics and study support personnel enabled an agile implementation and a systematic and sustainable method of student study support. Purposeful alignment to curriculum content benefited students who do not have face-to-face study support. Furthermore, embedding the study resources within the Canvas shell of the course limited potential challenges for students who may not have access to other websites and technologies.

The COVID-19 pandemic has changed higher education in ways not previously anticipated and has required all stakeholders in tertiary education to break from traditional pedagogical practice to collaborate and adopt agile ways of working. Critical to the value and benefit to students learning remotely are accessibility, efficiency, and sustainability of study support. Equally, that students apply these newly gained skills and knowledge across the years of their courses and programs. Resulting from findings of this study and the required change in higher education, the RMIT University Library-Learning, DVCE will continue to rollout Skills Immersion and undertake further longitudinal evaluation. In the new and volatile learning environment that has been changed so quickly because of COVID-19, additional and continued studies and research are required. At RMIT, we plan to demonstrate the longer term impacts of Skills Immersion and to build on the literature and research available in the support of all students studying in higher education globally.

Appendix 1: Business Intelligence Course Insights, Semester 1, 2021



Appendix 2: Workshop Evaluation Form

Academic Integrity, paraphrasing, quoting and referencing workshop

Please rate your confidence in different skills on a scale of 1 to 4:

1. No confidence 2. Slight confidence 3. Moderate confidence 4. High confidence

1. How confident do you feel dealing with academic integrity in your assignments following this workshop?

1 2 3 4

2. How confident do you feel dealing with paraphrasing following this workshop?

1 2 3 4

3. How confident do you feel dealing with quoting following this workshop?

1 2 3 4

4. How confident do you feel dealing with Harvard referencing following this workshop?

1 2 3 4

5. Overall, did this workshop help you do better in your assignments?

1 2 3 4

References

- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3).
- Beasley, E. M. (2016). Comparing the demographics of students reported for academic dishonesty to those of the overall student population. *Ethics and Behavior*, 26(1), 45–62. <https://doi.org/10.1080/10508422.2014.978977>
- Brown, T., Bourke-Taylor, H., Isbel, S., Gustafsson, L., McKinstry, C., Logan, A., & Etherington, J. (2018). Exploring similarities and differences among the self-reported academic integrity of Australian occupational therapy domestic and international students. *Nurse Education Today*, 70, 13–19. <https://doi.org/10.1016/j.nedt.2018.08.005>
- Crowther, D., Dyson, A., & Millward, A. (2001). Supporting pupils with special educational needs: Issues and dilemmas for special needs coordinators in English primary schools. *European Journal of Special Needs Education*, 16(2), 85–97. <https://doi.org/10.1080/08856250110040695>
- Denti, G. L. (2012). *Proactive classroom management, K–8: A practical guide to empower students and teachers*. Sage publication.
- Fass-Holmes, B. (2017). International students reported for academic integrity violations: Demographics, retention, and graduation. *Journal of International Students*, 7(3), 644–669.
- Frost, J., & Hamlin, A. (2015). A comparison of international student attitudes concerning academic dishonesty. *Journal of International Business Research*, 14(2), 153–165.
- Jayanthi, S. V., Balakrishnan, S., Ching, A. L. S., Latiff, N. A. A., & Nasirudeen, A. M. A. (2014). Factors contributing to academic performance of students in a tertiary institution in Singapore. *American Journal of Educational Research*, 2(9), 752–758.
- Jordan, M., & Belkin, D. (2016). Foreign students more likely to cheat: U.S. schools show higher rates of academic fraud among overseas enrollees. *The Wall Street Journal, Eastern Edition* (6 June 2016). <https://www.wsj.com/articles/foreign-students-seencheating-more-than-domestic-ones-1465140141>
- Karabenick, S. A., & Newman, R. S. (2009). *Seeking help: Generalizable self-regulatory process and social-cultural barometer*. In M. Wosnitza, S. A. Karabenick, A. Efklides, & P. Nenniger (Eds.), *Contemporary motivation research: From global to local perspectives* (pp. 25–48). Hogrefe & Huber Publishers.

- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2021). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education, 27*(2), 141–156.
- Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education, 3*(2), 70–85.
- Pownall, M., Harris, R., & Blundell-Birtill, P. (2021). Supporting students during the transition to university in COVID- 19. Five key considerations and recommendations for educators. *Psychology Learning & Teaching 2022, 21*(1), 3–18.
- Procter, L. (2020). Fostering critically reflective thinking with first-year university students: Early thoughts on implementing a reflective assessment task. *Reflective Practice, 21*(3), 1–14.
- Ryan, A. M., Patrick, H., & Shim, S. O. (2005). Differential profiles of students identified by their teacher as having avoidant, appropriate or dependent help-seeking tendencies in the classroom. *Journal of Educational Psychology, 97*(2), 275–285.
- Saunders, B., Kitzinger, J., & Kitzinger, C. (2015). Anonymising interview data: Challenges and compromise in practice. *Qualitative Research, 15*(5), 616–632.
- Surmiak, A. D. (2018, September). Confidentiality in qualitative research involving vulnerable participants: Researchers' perspectives. *Qualitative Social Research, 19*(3).
- Tabari, P., & Amini, M. (2020). Educational and psychological support for medical students during the COVID-19 outbreak. *Medical Education*. <https://doi.org/10.1111/medu.14376>
- Velliari, D. M., & Breen, P. (2016). An institutional three-stage framework: Elevating academic writing and integrity standards of international pathway students. *Journal of International Students, 6*(2), 565–587.
- Willison, J., Le Lievre, K., & Lee, I. (2010). *Making research skill development explicit in coursework: Five universities' adaptation of a model to numerous disciplines*. The University of Adelaide, The University of Melbourne, Monash University, Macquarie University, University of South Australia.



45

Supporting Students when Lecturing from Home: An Evaluative Inquiry of Lecturers' Perceptions

Paul Joseph-Richard and Timos Almpanis

Introduction

The purpose of this chapter is to describe and evaluate how lecturers provided student support during the COVID-19 pandemic, when they engaged in emergency remote teaching (ERT) from their homes. ERT refers to the 'temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstance' and 'it involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated' (Hodges et al., 2020, p. 7). When the pandemic struck in March 2019, universities, across the globe, had to stop all campus-based activities (Marinoni et al., 2020) and rapidly switched to new forms of online

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teaching (Radha et al., 2020). As the effectiveness of such ERT-related online activities is still being debated (Burki, 2020; Dorn et al., 2020), questions about how students were supported during this crisis are still not fully understood. While the online delivery of teaching might have provided certain benefits, such as increased access to a greater number of lecture recordings and library resources (Ali, 2020), students may have missed out on lecturers' support that otherwise is accessible to them when studying on campus. It can be assumed that students may have experienced additional issues around the areas of 'routine and self-discipline, mental/physical wellbeing, study motivation and feelings of isolation' (Raaper & Brown, 2020, p. 343) and many may have reached out to their lecturers for help in normal circumstances. This chapter—a part of a larger study that examined lecturers' views on the COVID impacts on academic practice as a whole—reports on the ways that students were supported during the crisis and it evaluates the effectiveness of teachers' actions. We present a qualitative evaluation of the perceived effectiveness of support practices. Two research questions guided our study:

1. What is the nature of student support given by lecturers during a pandemic?
2. From the perspectives of lecturers, how effective has student support been during a pandemic?

Literature Review: Conceptual Context

Importance of Student Support in Higher Education

Student support is an important aspect of academic practice within the higher education context and it can take many forms. It encompasses all types of help or assistance that students may need, from the chaplaincy to note-takers, from personal tutorial support to specific teaching contexts, such as learning support (Jacklin & Le Riche, 2009). Tait (2000) identified three main functions of support: cognitive (supporting learning), affective (ensuring a supportive environment) and systemic (ensuring effective administrative systems). In terms of the student support

provided by academic staff, it can come in two main forms: (a) supporting students as part of module delivery, responding to their questions and providing formative feedback and (b) providing tutorial and often pastoral support for allocated students as part of a university's tutorial scheme. Armellini et al. (2021, p. 9) state that 'an integrated and clearly articulated approach to student support, covering academic and pastoral elements of the student experience', is recommended as 'a low-cost, high value intervention in terms of curriculum design, teaching practice and learner support'. The need for a shift from student support, which frames support as a response to students' problems, to a more supportive culture where support is largely proactive has been advocated by Jacklin and Le Riche (2009).

Technology Enhanced Learning and student support: Technology has been used for individual and small group tutorials, email responses and so on as an established practice. Students value tutors who are available and approachable and expect high-quality support beyond the classroom according to a recent study (Armellini et al., 2021), which found that 'the support expected from tutors exceeds academic and module related requirements'. Tutors who promote opportunities for students 'to acquire professional experience or engage in relevant extracurricular activities are particularly valued' (*ibid.*, p. 6).

Students faced various issues during lockdown. Many of them were feeling lost as they were trapped away from family, and students' need for emotional support, due to homesickness that caused them to have feelings of loneliness, was pointed out long before COVID came along (Vergara et al., 2010). A recent study underlined the need to offer students emotional support and linked it with attrition rates: 'Therefore, in a competitive higher education environment, learning environments have to offer students with emotional support, such as counselling in order to curtail, not only homesickness but also possible attrition' (Netanda et al., 2019, p. 410). The need for emotional support was accentuated by last year's events. Other challenges faced by students due to the campus closures might have included access to a reliable internet connection and access to specialised software or hardware that are essential to their studies. These potential issues are not to be taken lightly and would need to be considered by academics on a case-by-case basis. In

essence, the lines between academic, technical and pastoral support became more blurred due to the unprecedented challenges faced by students during the pandemic. Empathy by academic staff was in high demand at a time when academics were confronted by their own challenges.

Staff Challenges in Supporting Students during Lockdown

Although working from home might have had some benefits for staff, such as commuting time gains, these benefits apply when staff are working from home out of choice, rather than as a necessity. In fact, working conditions might have deteriorated as a result of the conditions imposed around the COVID-19 pandemic and the related campus closures. Academics faced various issues as the line between work and personal life became blurred, and these include having to work from their kitchen/lounge, having to share the wi-fi with other members of the family for work/study purposes, having home-schooling responsibilities, having caring responsibilities and being locked-down 24/7 with their family members. In light of such strains, COVID-19 has contributed to an increased risk of employees facing exhaustion, including permanent feelings of disengagement (Walker et al., 2020).

The impact of the pandemic on the mental health of staff working in universities is well documented. Remote working, in combination with childcare and other personal responsibilities, has caused stress and anxiety among many academics (Gewin, 2021). Mid-career academics, in particular, have been severely hit according to a report by De Gruyter (2020), as they have to deliver online programmes and supervise students from home while, at the same time, they try to balance their home-schooling and other caring responsibilities. Furthermore, technology-mediated student support can be more time consuming than face to face. Demand for 'process-related' support rises significantly when teaching takes place using online environments according to one study (De Vries et al., 2005). Another study (Cavanaugh, 2005) showed that the amount of time spent teaching online was over twice the amount of time that

would have taken place if teaching was done in the classroom, and this was due to increased student contact and individualised instruction. Continuous staff development for online student support is paramount, as not all lecturers might be familiar with the various tools available to them (Almpanis, 2015). This backdrop created unprecedented challenges for the majority of academics, both in the UK and globally. This case study unfolds in this backdrop and brings to light how students were supported by lecturers who were under the additional pressures of timely completion of teaching and assessments, when teaching from home. We were guided by these two objectives: (1) to describe the characteristics of student support given by lecturers during the COVID-19 pandemic and (2) to examine lecturers' perceptions on the effectiveness of student support activities.

Methodology

Using an effectiveness-focused, descriptive qualitative design (Sandelowski, 2010), we collected data through video-based Skype interviews, as per the guidelines provided by Lo Iacono et al. (2016) and Hamilton (2014). On obtaining the Ethics committee approval from the host university, we purposively sampled ten academics working at five different UK universities, between June and September 2021—that is, three or more months into the first lockdown in the UK, ensuring maximum variation in terms of their gender, subject specialism and years of teaching experience (see Table 45.1).

With the use of in-depth, semi-structured interviews, we collected data for the larger study on the United Kingdom Professional Standards Framework's (UKPSF) five areas of activity (AdvanceHE, 2011). Accordingly, we focused on (i) staff experiences of designing teaching; (ii) delivering learning; (iii) assessing and providing feedback; (iv) developing an effective learning environment and supporting students; and (v) participating in continuous professional development. Prior to the interviews, we sent out an information sheet, an online consent form and a copy of an interview schedule with descriptive and evaluative questions related to the above topics. During the interview, we used probes and the

Table 45.1 Sample characteristics

Characteristics of the participants sampled				
Transcript Code	Gender	Teaching Experience (In years)	Subject Specialism	UG/PG
T1	M	5	Travel & Tourism	UG
T2	M	4	Engineering	PG
T3	M	6	Engineering	PG/ PGR
T4	M	7	Physiotherapy	UG
T5	M	5	Pharmacy	UG
T6	F	4	Management Consulting	PG
T7	M	20	HRM/OB	UG
T8	M	16	Project Management Business Management	UG UG
T9	M	8	Project Management Executive Education/ Law	PG PG
T10	F	6	Digital Marketing Research Methods	PG UG

length of the interviews ranged from 30 to 90 minutes. Interviews were audio-recorded and later were transcribed verbatim. Using Ritchie and Spencer's (2002) framework analysis methods, and in line with qualitative evaluation guidelines (Mertens, 2014), we analysed the data. Through an iterative process of coding, recoding and categorising, we looked for evidence in the transcripts of the ways in which the participants experienced designing, delivering, assessing and giving feedback, providing student support and evaluating learning outcomes while undertaking continuous professional development. Owing to word-limit constraints, in this chapter, we report our findings on how academics supported students (fourth area of activity in UKPSF) and how effective their efforts were perceived to be. Anonymised quotes, with transcript numbers, are presented to support each theme in the findings section that follows.

Findings

The nature of student support is queried by examining staff voices, particularly in relation to their views on (i) what kinds of support were given and when were they given, (ii) what kinds of educational technologies were used for student support and (iii) how effective their support activities were. Evidence of a heightened need for support from students and the lack of a formal evaluation of support activities came to the fore when analysing the data.

The Nature of Support in Three Areas of Care: Teaching and Learning, Technical and Pastoral

Staff were asked about the nature of the support activities that they were engaged in during the pandemic. Most of them highlighted that their students needed to be supported in meaningful ways so that they learn well during the pandemic. A participant mentioned how he had to support students who had been asked to return to their home countries during the semester:

If you take into account those time differences between India and Canada, synchronous learning can be extremely challenging for them. So, what I did in several cases during my synchronous delivery was that I recorded the session so it could be available for those who could not make it during that time. Because 9 o'clock in the morning here is late in the afternoon in India and very early in the morning in Canada. (participant 1)

The sudden move to online teaching triggered technological and mental health challenges for students, and lecturers had to give those students technical help and pastoral care:

I had students who were telling me, 'I don't have this; I don't have that.' I tried to help them in a way that they won't be disadvantaged. ... I was the customer service person at the time, I wasn't the lecturer anymore! I was trying to help them to install the software, to work with it ... to make sure

it is free, to make sure they get the trial ... that weren't part of my job before. (participant 2)

Some had problems with poor connectivity. I did a lot of one-to-one work with them. That is why my working times become longer. (6)

There was also a university driven demand, [a] request, I would say, to communicate with the students and see how they are doing. ... We tried to be there for them, we did care for them and we tried to support them to the best we possibly could. (10)

In particular, students with learning difficulties and those with certain medical conditions needed more enhanced, personalised support during COVID, and lecturers have gone the extra mile to tailor their support:

I spoke to the student. I knew her condition and I liaised with the module team in order to meet the needs for this student. ... At one point, we started calling the student, we [guided] her: 'By the way click on that, press this, go here, do this'; so we gave some support on that. Because we have a good relationship with our students, the students find it very easy to talk to us. (5)

I do a lot more, one-to-one meetings now. ... My teaching diary is full now, spreading across five days, because of taking in such meetings and appointments. I give a lot more contact time to students now. (9)

The Timing of Student Support: Always On

The need to give teaching and learning support in addition to technical help and pastoral care to students meant that lecturers needed to work even during the weekends:

I think that several colleagues, including myself, went beyond the normal duties. I had several interactions, both synchronous and asynchronous, during weird times of the day and the weekend. (participant 1)

Whenever they email me, I will try to respond to them as soon as I can and I will try to give them times that are not within the working hours, even if this is at night or at a time which is not really normal. I would be happy to help in that situation, that's all I could do for them. (2)

To manage their workloads, lecturers reached out to the central teams of experts within their respective institutions so that students could get experts' help in a more targeted way:

If we identified someone who was becoming overly anxious, we would refer them to the appropriate services in the university'. (participant 4)

I talked to our library, and I talked to many people ... to help students to get the equipment they needed. They offered some of the laptops and then there were issues with those laptops, and it was full of challenge, full of challenges that I couldn't overcome at that time. (participant 8)

Familiar Tools of Student Support: Email, Zoom, Telephone and Cloud-based Tools

When their work was disrupted, lecturers used a set of educational technological tools that were readily available to them. Two types of strategies were used by lecturers: these were to begin using the many built-in capabilities of online platforms that were once underutilised, during synchronous teaching, and to increase the frequency of using easily accessible communication tools, during asynchronous teaching.

During synchronous teaching, lecturers made better use of the tools that were available within the familiar systems, such as BlackBoard Collaborate or MS Teams:

I used MS Teams or Skype a lot to contact my students. It was less time consuming for them to quickly say 'hello'. All tutorials took place via Zoom and I used breakout rooms a lot. (4)

I use the Whiteboard [an interactive online space within a teaching platform]. I can also share my screen with them, so that was easy. (5)

Besides using the above tools, co-teaching was also used as a way of supporting students:

I deliver all of my classes with my colleague ... As I am teaching, I may not be able to monitor who raises their hand or who makes a comment. In [a] real life classroom, I would have noticed it immediately. ... What we found is that the co-teaching is really effective. My peer keeps an eye on what is going on there and we take turns. She might stop me and direct me to address a couple of comments students posted. (3)

During asynchronous teaching, however, lecturers made use of emails, telephone and online or cloud-based tools because they were both convenient and useful:

The communication [was] via emails and actually these were the only tools. (2)

[Students] used to work together and after Covid they couldn't work together. So, they tried to connect from different parts of the country and used One Drive to share their work. (7)

I encourage them to phone me so that I can discuss the things in detail. [In Turnitin], I created Quick Marks that are aligned with criterial elements. I used rubrics and the text comment box for feedback. I created an instruction sheet on how and where they can find feedback. (6)

We run projects with the students and these involve 1–1 support, with Skype. (3)

Were These Support Activities Effective? Limited Evidence of Systematic Evaluations

Participating lecturers, in general, did not undertake formal evaluations of their student support activities. However, an eclectic range of informal evaluation practices have been carried out by them. Many of them pointed out that they asked students if support activities were perceived as relevant. Some used the routine mid-term evaluations which, due to the timing of the first strike of COVID-19, did not capture the impact the pandemic had on student support provisions, and others refrained from evaluating the module due to the heavy interruptions caused by the pandemic.

I don't think I intentionally did anything apart from unofficially or informally asking the students 'what do you think about this, what do you think about that, does this work, does this not work or how can I make this better'. (1)

I tell them: 'Guys, tell me what worked and what didn't work?' then ... change it to meet the students' needs. (5)

During synchronous teaching, lecturers used multiple methods such as observation, listening to discussions, and collected instantaneous feedback from students via class representatives or using student polls:

I use Mentimeter to measure on-the-spot satisfaction scores. Prior to the class, I ask them to indicate on a Likert scale their satisfaction on issues such as lecture usefulness. When guest speakers leave the class, I ask students to rate the sessions' relevance and usefulness. I also had Staff-Student Consultative Committee meetings with Class Reps remotely in which they said that they liked my classes. I have to wait and see how they perform in their assessments. (7)

We had a mid-semester evaluation, which was actually at the end of March. So, when the lockdowns occurred, it was the final days of the evaluation, so I don't think that this was reflected on this year's evaluation. (2)

...We didn't evaluate the module or the teachers, we actually got rid of them too... it was a faculty decision. (3)

One participant feared that the students might have learned less because of the cancellation of the campus-based exams and another acknowledged that this is an area for his professional development:

I think the students learnt much less, just because we got rid of the exam. Their marks are probably the best thing to show how they performed. (3)

It is too early for me to tell. I won't know until I get their papers in front of me and I read them. That is the truth. I am checking in with them routinely but not getting a huge response back. So that is an area that needs improvement for me. (9)

Discussion

This study confirms the findings of recent studies (e.g. Crawford et al., 2020; Burns et al., 2020) that the students faced a range of technical, practical and emotional challenges. Lecturers had less time to introduce well-planned online learning experiences during this sudden and enforced move, but they could only improvise with hurried solutions in an increasingly complex, ambiguous and often stressful context. Research-informed discussions on the pace of delivery, appropriate pedagogy, nature of student support, suitability of tools and the who, when and how of student support seldom happened during this emergency (Means et al., 2014). As opposed to undertaking a careful designing of effective online learning experiences using instructional design principles, curriculum development models, module design standards and learning analytics, for example, lecturers have found themselves only able to hunt for the tools that were readily available to them already, so that teaching is delivered, and students' needs and priorities are met as quickly as possible.

This rapid shift has impacted institutions, technology and lecturers in several ways and this study highlights at least three of them. First, at an institutional level, students' needs shaped the style and substance of

support provision. Lecturers were forced to listen to the students' voice. They realised that what had worked for students before the campus closures may not work during the lockdowns. They were compelled to design new ways of responding to students' demands. They introduced greater flexibility in when and how they reached out to students, by adopting a kind of 'high touch-low tech' approach to student support. Setting aside any preconceived ideas about online teaching and virtual learning that they might have had during the pre-pandemic period, they changed their ways of providing personalised student support, to whatever the students expected of them. As a result, they accidentally became customer service agents, guides, consolers and healers, at least temporarily, at the time of this study. Given that the general impact of COVID-19 on teaching practice is not likely to disappear any time soon (GOV.UK, 2020), how the lecturers' new 'always on' student support approach becomes sustainable remains to be seen.

Second, this study reveals that innovation is not just about new technology, but about empathy, care and collaboration. Although the participants of the study did not report that they were introducing or using cutting-edge educational technology, they still used empathy to respond to students' needs. This is why lecturers reported that they were using the tools that are familiar to students, but that these tools were also the ones that were previously ignored or underutilised by themselves. Instead of asking what new tools could be purchased, they appeared to have asked what could they do with the existing tools that they had at their disposal to help students. Thus, their empathy made the tools relevant and meaningful, while making innovation everyone's job. Scaling up empathy-driven teaching innovations may be a challenge that institutions have to face in the future.

Third, lecturers also have adopted different ways of working and interacting with students using the tools they could exploit—largely conforming to what the institution or others are using—in supporting students. They reached out to their colleagues for co-teaching of module contents, to the ICT staff in introducing quick solutions and to the centralised teams for expert support. Despite the fact that this increased workload had been time consuming—a finding that is in agreement with the current and pre-pandemic literature (De Vries et al., 2005; Cavanaugh,

2005)—they were able to care for their students. They appeared to have realised that trust is needed when moving fast. Lecturers trusting knowledgeable insiders and developing a readiness to collaborate with centralised teams for the sake of students is a welcome sign of institutional transformation and positive student experience.

Taken collectively, the findings indicate that maintaining the same levels of ‘high touch-low tech’ student support provision may become even more challenging when teachers and students return to the campuses as striking a balance between synchronous/asynchronous online support and campus-based support will then become paramount. Scholars have already called for a holistic approach to student support ‘that comprises technological, financial, academic, library and emotional support’ (Netanda et al., 2019, p. 411); and they have established that the effectiveness of support provision depends on the time when support is offered (Rotar, 2022). Hence, we provide a caution that the lecturers might be stretched even further to provide such a holistic and yet more personalised student support in post-pandemic contexts, and creating ‘supportive’ cultures and contexts at institutional level is needed not only for students but also for teachers, who need to be more proactive, inclusive and responsive.

Transferable Strategies

1. Let students’ needs dictate the design of student support provision in institutions. Equipping lecturers with the necessary skills and resources might be a key to such a design.
2. Be creative in student support approaches. But remember, innovations in demonstrating empathy and flexibility might be more meaningful to students than an introduction of cutting-edge educational technology during ERT.
3. Develop new forms of partnerships between academics and educational technologists so that student support is characterised by inter-departmental trust and continuous learning.

Conclusion

This chapter has investigated the changing nature of student support during the first lockdown (spring/summer 2020) based on the lived experiences of ten participating academics. We found that while most participating lecturers went the extra mile in providing additional academic, pastoral and technical support to their students, often in what would be considered to be out-of-office hours, the support was reactive and ad-hoc. This is understandable due to the emergency of the situation, but as remote teaching has since been prolonged and has lasted for the best part of the following academic year (2020–2021) too, it raises important questions about how students' needs can be met more proactively in future situations where remote teaching might be the only option. Whilst it is reasonable to assume that the next academic year in many countries will have a continued requirement for social distancing, however, expecting lecturers to be *always on* and to be fully flexible may result in this being detrimental to their mental health and wellbeing. Despite the absence of systematic evaluations of the effectiveness of support functions, this study concludes that even during this unprecedented time, the perceptual evidence suggests that students' needs have indeed shaped how support was delivered, that lecturers' empathy has triggered practice innovations and that new collaborations with internal experts were developed to help students. We conclude that supportive cultures and contexts are needed not only for students but also for lecturers who will be challenged to become more inclusive and responsive.

References

- AdvanceHE. (2011). UK Professional Standards Framework (PSF). <https://www.advancehe.ac.uk/guidance/teaching-and-learning/ukpsf>
- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3), 16–25.

- Almpanis, T. (2015). Staff development and institutional support for technology enhanced learning in UK universities. *Electronic Journal of E-Learning*, 13(5), 379–388. <http://www.ejel.org/volume13/issue5/p379>
- Armellini, A., Teixeira Antunes, V., & Howe, R. (2021). Student perspectives on learning experiences in a higher education active blended learning context. *Tech Trends*. <https://doi.org/10.1007/s11528-021-00593-w>
- Burki, T. K. (2020). COVID-19: Consequences for higher education. *The Lancet Oncology*, 21(6), 758.
- Burns, D., Dagnall, N., & Holt, M. (2020). Assessing the impact of the Covid-19 pandemic on student wellbeing at universities in the UK: A conceptual analysis. In *Frontiers in education* (Vol. 5). Frontiers Media.
- Cavanaugh, J. (2005, Spring). Teaching online: A time comparison. *Online Journal of Distance Learning Administration*, 8(1). Retrieved February 3, 2021, from <https://www.westga.edu/~distance/ojdla/spring81/cavanaugh81.htm>
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 1–20.
- De Gruyter. (2020). Locked Down, Burnt Out. Publishing in a pandemic: The Impact of Covid on academic authors. Retrieved March 25, 2021, from <https://tinyurl.com/52s59n6a>
- De Vries, F., Kester, L., Sloep, P., Van Rosmalen, P., Pannekeet, K., & Koper, R. (2005). Identification of critical time-consuming student support activities in e-learning. *Association for Learning Technology Journal*, 13(3), 219–229.
- Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). *COVID-19 and student learning in the United States: The hurt could last a lifetime*. McKinsey & Company.
- Gewin, V. (2021). Pandemic burnout is rampant in academia. *Nature*, 591, 489–491. <https://doi.org/10.1038/d41586-021-00663-2>
- GOV.UK. (2020). Analysis of the health, economic and social effects of COVID-19 and the approach to tiering. <https://tinyurl.com/tadmzy82>
- Hamilton, R. (2014). Using Skype to conduct interviews for psychosocial research. *Computers, Informatics, Nursing*, 32(8), 353–358.
- Hodges, C.B., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. <https://tinyurl.com/5ecw28dd>
- Jacklin, A., & Le Riche, P. (2009). Reconceptualising student support: From 'support' to 'supportive'. *Studies in Higher Education*, 34(7), 735–749.

- Lo Iacono, V., Symonds, P., & Brown, D. (2016). Skype as a tool for qualitative research interviews. *Sociological Research Online*, 21(2), 103–117.
- Marinoni, G., Van't Land, H., & Jensen, T. (2020). The impact of Covid-19 on higher education around the world. IAU Global Survey Report.
- Means, B., Bakia, M., & Murphy, R. (2014). *Learning Online: What research tells us about whether, when and how?* Routledge.
- Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (4th ed.). London.
- Netanda, R. S., Mamabolo, J., & Themane, M. (2019). Do or die: Student support interventions for the survival of distance education institutions in a competitive higher education system. *Studies in Higher Education*, 44(2), 397–414.
- Raaper, R., & Brown, C. (2020). The Covid-19 pandemic and the dissolution of the university campus: Implications for student support practice. *Journal of Professional Capital and Community*, 5(3/4), 343–349.
- Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. *International journal of control and automation*, 13(4), 1088–1099.
- Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. *The Qualitative Researcher's Companion*, 573, 305–329.
- Rotar, O. (2022). Online student support: A framework for embedding support interventions into the online learning cycle. *Research and Practice in Technology Enhanced Learning*, 17(1), 1–23.
- Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, 33(1), 77–84.
- Tait, A. (2000). Planning student support for open and distance learning. *Open Learning*, 15(3), 287–299.
- Vergara, M. B., Smith, N., & Keele, B. (2010). Emotional intelligence, coping responses, and length of stay as correlates of acculturative stress among International University Students in Thailand. *Procedia-Social and Behavioural Sciences*, 5, 1498–1504.
- Walker, J. T., Fontinha, R., Haak-Saheem, W., & Brewster, C. (2020). *The effects of the COVID-19 lockdown on teaching and engagement in UK Business Schools*. <https://doi.org/10.2139/ssrn.3717423>



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Staff Reflections on Surviving and Thriving in a Suddenly Disruptive Education Environment

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Staff as Learners

Understanding the perceptions of online education has been a core component of business colleges and faculty for many years (e.g. Tanner et al., 2009). Typically, online education is viewed as being at the opposite end of a spectrum from traditional face-to-face learning (Sun & Chen, 2016). Much of the research in the online learning space involves a comparison between learning outcomes and learning effectiveness of asynchronous online environments with traditional learning methodologies (e.g. C.-P. Lin et al., 2010; Tanner et al., 2009), with investigations focused on students.

What is less well known is the impact transition to online teaching has on staff and their learning in particular. This research seeks to address some of this imbalance by exploring our experiences as we undertook the sudden transition to online learning that the unprecedented

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circumstances of 2020 demanded. The three academic staff involved in this research project will reflect from three different perspectives, first, as a front-line facing educator with direct transition course experience, second, as a discipline leader looking at a range of offerings within that discipline, and third as a department leader.

Reflection Methodology

Reflective analysis, also called critical reflection and reflexivity, is an established research methodology (e.g. Cathro et al., 2017), including in the field of education (e.g. Postholm, 2018). Traditionally, reflective practice has occurred from the student side or focuses on teachers using it to benefit students. Teacher-focused reflective actions are not as common, however, in cases where it is used, the results are informative. Previous research has found that reflection is a crucial activity for teachers' professional development (Clarà, 2015; Postholm, 2008), a key contributor of job satisfaction (Postholm & Wæge, 2016), a critical quality of effective teachers (Stronge, 2018), and plays a role in developing teachers who can also research (Postholm, 2009).

The adoption of reflective research in this chapter responds to calls for global attention around the topic of learning in lockdown as educational institutions consider workforce skills development, student learning, connection/collaboration and the overall disruptions online transition wrought (Hannigan & Saini, 2020; Webb, 2021). In reflection research, one thinks critically about one's practices and considers the possibilities for change and development while being mindful of any assumptions or ethical considerations that framed those actions (e.g. Brookfield, 1998). Thus, the focus is forward-looking and positive in framing, rather than getting 'stuck on ... past experiences' (Postholm, 2009, p. 553).

We reviewed our 2020 practices through four complementary lenses, first, the learner as a reflective practitioner or self-assessor. Second through the learners' eyes by having a sense of what is happening from students' perspectives. Third, the lens of our co-authors' perceptions and fourth, the theoretical lens used to give names to our practices (Brookfield, 1998). In doing so, we opened our reflections with consideration of

online learning communities through the social exchange perspective (C.-P. Lin et al., 2010), the important role of social support, this being social and psychological support received or perceived by an individual in their environment (N. Lin, 1986), and experiential learning (Kolb, 1984). Reflections were written using a structured narrative approach to uncover insights (Bruner, 2009; Polkinghorne, 1988) by considering how we solved problems, internalised goals or made decisions (Garud et al., 2011). Care was undertaken to ensure an ethical reflection, incorporating values within our critical thinking approach, including seeking formal ethical approval from our review body for our approach.

Uncertain Times

Readers of this book require little introduction to the impact of COVID-19 on educational opportunities, with many institutions of higher learning around the world replacing traditional face-to-face instruction with virtual learning platforms. In February 2020, as RMIT University in Australia was preparing for the imminent commencement of its Semester 1, a key concern was scheduling online learning opportunities for students from China who were impacted by travel restrictions barring their entry. This delay was expected to last up to four weeks, and academic staff prepared content for that period, expecting that they would teach in a blended mode while local students still attended campus.

That landscape rapidly evolved. With the authorities imposing increasingly strict restrictions on movement, including border bans for all destinations, RMIT elected on Monday, March 23, three weeks into its semester, to suspend all face-to-face learning and teaching activity on Australian campuses. As part of a total shift to online learning, all lectures would be delivered asynchronously (via pre-recorded videos and similar materials) while tutorials, seminars and workshops would be delivered synchronously, in real-time, via online collaborative tools. The School of Economics, Finance & Marketing, which provides the context for this chapter, was no stranger to online learning approaches in contemporary education. However, the pandemic response required a rapid and agile shift in core business. In this chapter, a department head (JB), a discipline

leader (AD) and an experienced teacher (CS) reflect on one of the most challenging events in our careers.

The impact of COVID-19, unlike many other incursions into the bond between educator and student, was unique. Between us, we have witnessed an array of displacement and disruption in lengthy careers. However, in previous instances, two things were apparent. First, there was usually time to plan and second, even if there was a limited preparation possibility, the endpoint was in view, so the period of adjustment was known and could be catered around.

COVID-19's lasting impact on society, beyond the sickness, is its uncertainty. The problem was large-scale with no clear end, without control and no apparent boundaries. It became a paralysing force. In such large-scale uncertainty environments, decision making can become confused or withheld. It leads to second guesses, reactive approaches and splinters the well-understood pacts (van Asselt & Vos, 2006) between student/teacher, teacher/teaching teams and staff/management. Those pacts are complicit in shared journeys. For staff and management, a pact is present also in the understanding of workloads, the support and resources required to complete tasks and the concrete structures in place that enable smooth operations. COVID-19 foisted uncertainty into this mix, disrupting in unprecedented ways.

Choosing the Right Pathway

Our journeys in 2020 had already begun when 'flatten the curve' became a common refrain. Aside from some delayed students, our semester began with some normality. For example, CS, a course coordinator and teacher, describes his observations from the classroom:

My classes were already underway. Groups had been formed, and a rhythm of learning, critical to my approach, had been established. My learning pedagogy sees me as a constructivist conductor, leading by directing; however, if we allow the analogy to play out, the students are the ones providing the sweet music. (CS, reflection notes)

As curve flattening was meant to take only a few weeks, and with a mid-semester break looming, any interruption appeared annoying yet minimal. This assumption led to a false start of sorts where adjustments and rearrangements fixated on navigating a speed hump on the road ahead rather than charting a different path. By the time this became apparent, it was almost too late.

With the perfect vision of hindsight, we realised we should have overdesigned the changes and scaled back if necessary, rather than making small increments. The latter approach seemed normal since it had worked in the past. However, the disruption was unique, and the established playbooks now made little sense.

The saving grace allowing the correction to be made to initial plans was the impact of the pandemic, as the name literally suggests, being global. There was no fault to be laid at the feet of the institution or the academic; it was an external force that collided with all aspects of lives. This allowed the bond of common adversity to form, and students rapidly became co-designers in the search for solutions—an ideal in some respects given the appeal of such collaboration in modern education approaches (Finch et al., 2013). Suggestions were made as to how online classes might work, students and staff taught each other the basics of collaborative networks and any hiccups in delivery were swept under the experiential carpet.

The commonality of the COVID-19 enemy made the initial semester ultimately one of liberation. Trial became necessity, and in perhaps the most cathartic aspect of all, the rigidity of university rules were relaxed somewhat to deal with the myriad of unusual circumstances that were faced. Potential student extensions were tripled in length, assessments could be amended on the fly and control of the learning experience felt like it had returned to the individual discretion of the academic. CS relished this unexpected windfall, describing it as follows:

As an academic with decades of experience, it felt like a return to the 'early days' where academic-student interaction was a more personalised and decentralised experience and not the modern equivalent of (more) rigid policies and multiple layers of decision-making. While many of those contemporary changes had occurred for good reason, the dynamism of the simple scholarly connection was empowering and significant. For

experienced staff it ultimately meant that my student evaluations, despite the chaos, did not dip. In fact, they grew slightly more positive. (CS, reflection notes)

Student evaluations of teaching are a ubiquitous but controversial source of information about teaching quality (Boring, 2017; Feistauer & Richter, 2017). Educational leaders use student evaluations for the dual purposes of improving the student experience and evaluating academic staff performance (Hornstein, 2017; Mitchell & Martin, 2018). Concerns were expressed that for Semester 1 2020, students' responses would reflect their life circumstances rather than instructional quality. As a result, a decision was made that student evaluations would not be used as part of the academic promotion process unless requested by staff.

What was striking, however, was that student evaluations appeared to be stable, even averaging higher in many instances. Access to the schools' course evaluation surveys is part of JB's leadership position as a learning and teaching department head. From analysing the open-ended comments, he saw four themes related to a positive student experience emerge. First, staff cared about students' understanding of the material and their success in the course. Second, students were impressed that teaching teams found the information interesting themselves and enjoyed sharing it. Third, the application of learning to a real-world context helped provide students with a sense of purpose to their studies. And fourth, content and curriculum were well organised, clearly presented, easy to follow and aligned with both expectations and assessments. JB describes his analysis in this extract focusing on staff efforts:

[I could see] clear communication on how teaching staff would be interacting with them, how they would be guiding them through the content and expectations regarding assessment were key to a positive student experience. Conveying positivity and optimism that students could succeed and demonstrating support and caring was crucial to keeping students engaged. Respecting students' time and energy by being present and engaged was highly valued by students, as was highlighting the purpose of learning activities with simple prompts to anchor their learning. (JB, reflection notes)

Educators acknowledged and rapidly accepted that online facilitation was not the same as face-to-face delivery and found creative ways of reimagining the process. Virtual discussion boards were created for knowledge sharing, including instructions for tools (e.g. Collaborate Ultra and PowerPoint), guidance and support resources (such as the COPE Framework), invitations for virtual conferences and special issues of journals. The student evaluation results provide an important lesson. While we have the technology to deliver remotely, staff caring about students' learning, meaningful presence, engagement and passion positively impact students.

Consequently, staff recognised that there was a need to think creatively about how to engage a remote and digital learner, particularly at a time when learners had so many other things on their minds. Virtual classes opened the possibilities of guest presenters outside of the immediate geographic area. Staff explored software such as those used to create closed captions and videography and hardware, including green screens and microphones. By asking themselves, 'what is the ultimate objective for the student' and focusing on the reason rather than the method, staff found ways of harnessing new opportunities.

The Role of Leaders

Research has highlighted that the skills required of educational leaders in times of crisis are markedly different from those required in the 'normal' educational environment (Smith & Riley, 2012). Skilled leaders are those that are both motivated and motivating visionaries (Kouzes & Posner, 2006). However, in times of crisis, leadership must also engender certainty and hope and become a unifying point for effective effort, thus 'ensuring open and credible communication to and for all affected members of the school community' (Smith & Riley, 2012, p. 57).

As academic leaders, crises like this require us to reflect on our principles and priorities and ask ourselves difficult questions about how our beliefs and values translated to our behaviours (Liu et al., 2021). Our periods of individual reflection showed us how we had each navigated the turbulence of this time to come to the shared realisation of the

importance of authenticity, self-care and communication. JB summarises as follows:

Over the initial months of the crisis, I navigated my emotional response to the pandemic while attempting to model the leadership competencies I believed were important at the time, including empathy, self-awareness, presence, adaptability and transparency. Holding that complexity has not always been simple. Academic leaders need to be aware of what we are feeling, what emotions may be most difficult for us to manage, and work on having them under control before communicating publicly. (JB, reflection notes)

As the discipline leader, AD found herself reflecting on her leadership style and realising it was inadequate in a fully online world. She describes it this way:

Previously, I described my leadership style as a mixture of collaborative (building relationships and networks to create new opportunities) and building talent (creating an inclusive culture that encourages growth and development). But everything I've ever been as a leader, as an academic, was based on face-to-face connections. I really didn't realise just how much of my style and practice is built around this type of interaction until 2020 forced me to take note. Supporting staff in 2020, during the very long months of stay at home orders meant a major change in the way I worked, managed and lead teams. (AD, reflection notes)

At a time when cognitive overload loomed and information was incomplete, traditional analysis paralysis needed to give way to a pre-emptive focus on the priorities for business continuity, and the core priorities needed to be communicated to academic staff. As academic leaders, we realised that communication must be transparent—conveying what we know, or did not, or could not know, and what we are doing/could do—and formed a cornerstone in helping us to perform our respective roles.

In his position, JB felt staff engagement and maintaining a sense of belonging to the school community as a significant responsibility. The focus from leadership revolved around ensuring critical functions,

including those related to student learning, were maintained. He also noticed that leadership communications had changed in tone:

I noticed that senior leaders were showing vulnerability in their presentations, opening up in ways I've not seen before. They were still espousing a positive vision for the future, which was critical for morale, but emotions were on show, managed of course. It was like management was saying, 'we're all in this together, I am feeling the same way you are. We have to focus on business continuity, but let's not judge anyone for feeling the way they do'. I realised that while all the important communication pieces, the planning pieces, the prioritisation pieces that keep the boat afloat all still have to be done, and done professionally. But space was being given to emotions, recognising them, managing them, observing them, not being judgemental. I saw a change in the definition of what we mean by professional (JB, reflection notes).

Communication needs to recognise emotions, convey organisational norms and contain a hopeful vision of the future towards which people can direct their energy. Living with the discomfort of not having all the answers, being vulnerable and relying upon each other are leadership traits that have proved to us to be crucial over the course of this pandemic.

Changing Expectations

While the initial common enemy of COVID-19 and a desire to chart our destiny led to early success, it was never to be taken for granted. As a result, as one semester ended and another began, perspectives changed markedly. Students openly questioned if they were getting what they paid for—a face-to-face campus experience where mingling with staff and students was central to the learning journey. We saw the impacts of the loss of students' social supports (N. Lin, 1986) as they were no longer plugged into academic environments such as clubs, physical library access, use of study and group meeting spaces, classroom experiences and network building. We worried about the impacts this could have on students, in

particular the consequences of emotional exhaustion and disengagement (e.g. Basinska & Gruszczynska, 2020).

Our institution tried earnestly, investing time and money into upskilling as necessary and drawing on staff with knowledge and expertise to help train others and lead the confidence building charge. The result, as expected, was mixed. Whereas once what universities delivered online was a relatively unique offering, including the packaging of materials, the explosion of social media platforms has made the playing field incredibly uneven. In the previous semester's rush to online, technology lapses and other issues were forgiven, but this was no longer acceptable. Quite simply, expectations had risen.

For an academic, the use of online learning tools necessitated conveying concepts, which in a business teaching environment often rapidly changed. It also had to feature elements of engagement—reasons to watch, reasons to comprehend and reasons to engage. While these requisites all existed in the classroom centred on the physical presence of the academic, they were challenged by the online collaborative space. Most noticeably, the feedback loop inherent in the class environment was distorted to a point where it was often rendered meaningless. AD describes it as follows:

In our large discipline group, I was witness to conscientious, passionate staff pouring themselves into their online deliveries but the thinking and planning time, the ability to research best practice or explore multiple options, and ensure online learning was achieving andragogical/pedagogical objectives were time-compressed. Further, the skills of academics to meet these increased demands and the digital, technological and infrastructure based resources required were not necessarily systematically in place, which had clear implications for both student and staff experiences and satisfaction. (AD, reflection notes)

We questioned ourselves and each other, asking, 'were students really engaging?' The physical clues were missing, making little classroom adjustments that were almost done unconsciously, impossible—and rendering the experience ethereal rather than one of genuine connection. The energy needed to 'connect' online was far greater. Once we could

leave a classroom exhilarated, however, even the best online engagement typically manifested exhaustion and critical reflection.

Some staff held their own counsel, others called on mentors and academic leaders. Those of us in leadership positions tried to disseminate information, including tips, tricks and tools, providing summaries of what had worked for quick adoptions—but the ramifications started to be felt and witnessed.

Balancing the Demands

The outcomes of an unexpected and rapid transition to a new form of working cannot help but take a toll on the wellbeing of the staff. With job markets crumbling, student mobility crippled, online experiences draining and the continuing uncertainty around COVID-19 itself weighing heavily, we worried about colleagues, students and the broader academic community, as well as about ourselves. Staff unease was emerging as one of the sector's biggest challenges, precisely at a time when there was a need to unlock more innovation.

At the same time as staff had these concerns, the students needed to remain the priority and required continual coaxing. CS describes it in this way:

I felt myself evolving from an instructor to something akin to a sports coach, managing each individual on the 'team' to maximise their performance and synergise the greater good of the class. As a result, feedback levels escalated, my classes started with a simple question of 'how are you feeling?' which was meant literally, and extra effort was expended to keep everyone on the learning journey pathway. (CS, reflection notes)

In JB's leadership role, he witnessed a similar reaction among the staff to deal with the situation.

... educators increasingly shifted their perspective toward building greater trust in colleagues, recognising the value each person brought to work. Educators became more comfortable expressing themselves when they did

not have an answer, needed something, or were not feeling strong. This had ripple effects throughout the School, encouraging others to do the same and creating deeper connections. Educators who previously may have been reluctant to accept advice or explore ed (education) tech tools began to independently seek out support, try new ideas for themselves and share their learnings with others. (JB, reflection notes)

More broadly, the university offered professional wellbeing and health programmes, filling our inboxes with messages of support and encouragement. Nonetheless, the potential for disengaged staff was something inherently understood. Opportunities to come together virtually were seen as critical to maintaining a sense of connection, however, the ability to build camaraderie was challenging. AD notes:

... some staff would enter our virtual discipline group meetings with their cameras on, but everyone had their camera off for the official start of the meeting, and I would be the only one with mine left on. I understand the carbon footprint benefits and being sensitive to people's home/work environments and personal preferences, but I did worry that people could not be as engaged (or were distracted or giving their attention to other tasks). It felt like I was having a meeting with myself because my face was the only one on the screen. It was disconcerting, to say the least. (AD, reflection notes)

Ultimately there was a reckoning of the impact the COVID-19 situation was having. A phrase was called to JB's mind, 'a shared flinching of the brain's temporal lobe'. People comprehended what everyone else was going through because it was a shared, lived experience. While this cognitive acceptance and understanding were necessary for survival, the emotional consequences in the longer term are not yet understood and are something we all need to remain conscious of as we move forward.

Our Lessons

Narratives play a sense-making role for participants attempting to retrospectively find meaning in a complex set of sometimes ambiguous experiences (Garud et al., 2011; Robert V Kozinets, 2008; Robert V. Kozinets et al., 2010). We acknowledge that our reflections could involve recalling interactions with others or involve our institutions' processes, policies or institutional responses to world events. However, our narrative research is focused on sense-making our experiences; it is internal and self-focused.

Moving forward, if we are going to embrace, and be excellent at, the use of digital technologies in the creation of meaningful virtual learning environments, it is imperative to properly train staff and provide the resources, infrastructure and support community necessary for a 'designed information space' (Dillenbourg et al., 2002, p. 4). New and envisaged virtual learning environments should be explicitly represented, allowing space for students to be both active and actors (co-creators) (Dillenbourg et al., 2002). Staff need time and training to strategically design online learning curricula, content scaffolding, assessment development, video production (including scriptwriting, storyboarding, editing and videography components) and to explore and integrate delivery opportunities in courses and across programmes (including webinars, podcasts, interactive technologies and virtual collaborative tools).

As we move beyond the immediacy of this moment, educational leaders will be asking what we will take with us and how will it inform our work. In the first few months of the crisis, feeling overwhelmed and focusing on the short term were understandable. More recently, leaders have recognised the need to make a swift shift to a future-oriented focus on transformational change to sustain and advance core missions and ensure the long-term success, and in some cases survival, of our institutions. Staying one step ahead of change, if it can be done, provides a buffer when disruption occurs. COVID-19 has demonstrated the need for rapid response, necessitating that institutions be agile in decentralising and thus providing adroit capabilities to meet unexpected needs. Smaller, empowered decision-making units can help increase innovation, leading from the bottom at the same time as the top sets strategic priorities.

While some of the problems we continue to face are technical in nature, some are wicked. There is incomplete or contradictory knowledge, there are many stakeholders and these problems are interconnected. We've realised three salient lessons, first, the importance of taking the long view with future planning and the need to be open to change. Second, the requirement to be both adaptable and creative, which means embracing passion and agility while maintaining authenticity. Third, the critical role of community, including the value of social supports, communities of practice and knowledge sharing.

References

- Basinska, B. A., & Gruszczynska, E. (2020). Burnout as a state: Random-intercept cross-lagged relationship between exhaustion and disengagement in a 10-day study. *Psychology Research and Behavior Management, 13*, 267.
- Boring, A. (2017). Gender biases in student evaluations of teaching. *Journal of Public Economics, 145*, 27–41.
- Brookfield, S. (1998). Critically reflective practice. *Journal of Continuing Education in the Health Professions, 18*(4), 197–205.
- Bruner, J. S. (2009). *Actual minds, possible worlds*. Harvard University Press.
- Cathro, V., O'Kane, P., & Gilbertson, D. (2017). Assessing reflection. *Education+ Training*.
- Clarà, M. (2015). What is reflection? Looking for clarity in an ambiguous notion. *Journal of Teacher Education, 66*(3), 261–271.
- Dillenbourg, P., Schneider, D., & Synteta, P. (2002). *Virtual learning environments*. Paper presented at the Proceedings of the 3rd Hellenic conference information & communication technologies in education.
- Feistauer, D., & Richter, T. (2017). How reliable are students' evaluations of teaching quality? A variance components approach. *Assessment & Evaluation in Higher Education, 42*(8), 1263–1279.
- Finch, D., Nadeau, J., & O'Reilly, N. (2013). The future of marketing education: A practitioner's perspective. *Journal of Marketing Education, 35*(1), 54–67.
- Garud, R., Dunbar, R. L., & Bartel, C. A. (2011). Dealing with unusual experiences: A narrative perspective on organizational learning. *Organization Science, 22*(3), 587–601.

- Hannigan, B., & Saini, S. (2020). Learning in Lockdown: A case study of international student experiences of the COVID-19 lockdown.
- Hornstein, H. A. (2017). Student evaluations of teaching are an inadequate assessment tool for evaluating faculty performance. *Cogent Education*, 4(1), 1304016.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Kouzes, J. M., & Posner, B. Z. (2006). *The leadership challenge* (Vol. 3). John Wiley & Sons.
- Kozinets, R. V. (2008). Technology/ideology: How ideological fields influence consumers' technology narratives. *Journal of Consumer Research*, 34(6), 865–881.
- Kozinets, R. V., de Valck, K., Wojnicki, A. C., & Wilner, S. J. S. (2010). Networked narratives: Understanding word-of-mouth marketing in online communities. *Journal of Marketing*, 74(2), 71–89. <https://doi.org/10.1509/jmkg.74.2.71>
- Lin, C.-P., Chiu, C.-K., Joe, S.-W., & Tsai, Y.-H. (2010). Assessing online learning ability from a social exchange perspective: A survey of virtual teams within business organizations. *Intl. Journal of Human–Computer Interaction*, 26(9), 849–867.
- Lin, N. (1986). Conceptualizing social support. In *Social support, life events, and depression* (pp. 17–30). Elsevier.
- Liu, B. F., Shi, D., Lim, J. R., Islam, K., Edwards, A. L., & Seeger, M. (2021). When Crises Hit Home: How US Higher Education Leaders Navigate Values During Uncertain Times. *Journal of Business Ethics*, 1, 1–16.
- Mitchell, K. M., & Martin, J. (2018). Gender bias in student evaluations. *PS: Political Science & Politics*, 51(3), 648–652.
- Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. SUNY Press.
- Postholm, M. B. (2008). Teachers developing practice: Reflection as key activity. *Teaching and Teacher Education*, 24(7), 1717–1728.
- Postholm, M. B. (2009). Research and development work: developing teachers as researchers or just teachers? *Educational Action Research*, 17(4), 551–565.
- Postholm, M. B. (2018). Reflective thinking in educational settings: An approach to theory and research on reflection. *Educational Research*, 60(4), 427–444.
- Postholm, M. B., & Wæge, K. (2016). Teachers' learning in school-based development. *Educational Research*, 58(1), 24–38.

- Smith, L., & Riley, D. (2012). School leadership in times of crisis. *School Leadership & Management, 32*(1), 57–71.
- Stronge, J. H. (2018). *Qualities of effective teachers*. ASCD.
- Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education, 15*, 1.
- Tanner, J. R., Noser, T. C., & Totaro, M. W. (2009). Business faculty and undergraduate students' perceptions of online learning: A comparative study. *Journal of Information Systems Education, 20*(1), 29.
- van Asselt, M. B. A., & Vos, E. (2006). The precautionary principle and the uncertainty paradox. *Journal of Risk Research, 9*(4), 313–336.
- Webb, J. (2021). Learning in lockdown: A case study in rapid transition to remote teaching. *Business Information Review, 0266382120984731*.



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Joining the Dots: The Changing Identities of University Learning and Teaching Fellows

Helena Knapton and Dawne Irving-Bell

Introduction

The radical shift to online learning at the start of the first lockdown (March 2020) required the development, introduction and implementation of learning and teaching strategies within the shortest of timeframes. To do this successfully, there needed to be an approach that would bring together those who had the authority to develop the necessary strategies and those who would be able to communicate these and support colleagues in their implementation. This case-study evaluates the lived-experiences of one group of individuals, institutional Fellows, who found themselves key to this management of change and their role in ‘joining-the-dots’ from strategy development to implementation. Having explored ‘Fellowship’ as a mechanism to manage large-scale change, this chapter concludes by outlining the potential longer term implications and benefits of working with an identified group of individuals who are able to cross traditional institutional boundaries.

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The Edge Hill University Fellowship Scheme

At Edge Hill University learning and teaching development has been founded upon transformational leadership, academic autonomy, a strong social justice ethos and commitment to widening participation. Within the University, the Centre for Learning and Teaching (CLT), set up initially as a result of the Centres for Excellence and Teaching Programme (2005-2010), has maintained an overarching intention of influencing the culture and attitudes with regard to teaching and learning similar to that described in the summative evaluation of the CETL programme (SQW, 2011). Key to this is the work that is undertaken to recognise and reward those staff who have a commitment to their own professional development of teaching and seek opportunities to strategically develop their practice and to influence others in their sphere. Colleagues apply for Institutional Teaching and Learning or SOLSTICE (Technology Enhanced Learning) Fellowships with support from their faculty, but the leadership of the scheme comes from within the CLT. In keeping with the concept of post-heroic leadership, Fellows are given opportunities to network across the institution and externally through their role as reviewers in the University UKPSF Scheme, delivering professional staff-development sessions, involvement with pan-university working groups and presenting at the annual international CLT/SOLSTICE conference. In turn, Fellows are expected to exercise their own academic leadership attribute of self-efficacy (Dumulescu & Muşiu, 2021).

Transformational leadership as described by Dvir, Eden, Avolio and Shamir (2002, p. 735) is where leaders and/or managers adopt an approach that allows for the 'broadening and elevating (*of*) followers' goals and providing them with confidence to perform beyond the expectations specified in the implicit or explicit exchange agreement'. Thus, staff are facilitated in the development of skills and opportunities using the concept of post-heroic leadership, that is, beginning with the 'manager as developer' (Bradford & Cohen, 1984) together with subsequent developments including the adoption of social networks of influence (Billing & Alvesson, 2000; Elliott & Stead, 2008; Fletcher, 2004; Eslenzia & Erhart, 2015). Central to this is CLT who facilitate the Institutional Learning and Teaching Fellowship scheme.

The place of transformational leadership sits within a dominant narrative of incremental organisational improvement, reflecting the Japanese management concept of continuous development and *kaizen* (Carnerud et al., 2018). Alongside this, transactional leadership—‘leadership which makes clear what actions and roles followers must take to achieve goals’ (Kark et al., 2018, p. 187)—was linked very firmly within the hierarchical/management systems, including the quality assurance of learning and teaching, and against a background of NSS, Graduate Outcomes and TEF. However, the impact of Covid-19 has been so disruptive that an attitude of gradual improvement by traditional mechanisms was no longer fit for purpose—at least in learning and teaching terms—and is more accurately reflected by Harrison (2017, p. 94),

... perspective changes how the present is viewed. No longer an accumulation of the past, the present is an enactment of the future, and the significance of present events and decisions is determined in the light of future states.

Changes to the Fellowship during the Pandemic

There was an urgent need to be able to move from the traditional norm of present-in-person teaching and beyond remote teaching to new pedagogies that would be judged in the future in both the public and private teaching and learning domains.

As was evident elsewhere in the sector, collaboration became key to effective change (Dumulescu & Muşiu, 2021) and working groups proliferated at both institutional and faculty levels. This included oversight groups such as the institutional ‘Transition-to-Online Learning Steering Group’, as well as sub-groups investigating and leading on curriculum design, online delivery of practical and performance subjects and ones identifying key technologies that needed to be adopted. Faculties in turn developed oversight and planning groups such as the Faculty Learning, Teaching and Assessment Strategy Group and the Learning Design Group. As these groups developed, Institutional Fellows expertise was

sought at all levels to inform decision making and to act as conduits to work in professional-development roles with both academic and professional support colleagues at a time when their own practice had been involuntarily disrupted. Instead of being second-line responders as described by Neuwirth et al. (2021) Institutional Fellows became first-line responders within the university context.

To capture the lived experiences of our Fellows this research was undertaken in response to this continuously evolving context and the key roles Fellows undertook in implementing change. By capturing the evaluative reflections from our Fellows, including their perception of influence, efficacy and autonomy it will shape and inform the future direction of the Fellowship scheme at an institutional level and their place within faculty developments.

The Research Questions

To address the aim to provide an insight into the impact of changes on the role of Fellows resulting from the first lockdown, the following research question was designed:

How has the role and influence of a Fellow changed as a result of lockdown and the rapid change to teaching online?

Research/Evaluation Procedure

The approach to research, analysis and evaluation has been to create a robust process that captured the views and lived experiences of Fellows whilst recognising the insider researcher status of those gathering and interpreting the data. As insider-researchers there is the increased possibility that both the data collection process and the understanding and interpretation of the data are influenced in a way that creates bias and undermines the value of the findings. On the other hand, the closeness of the researchers to the situation allows for insight into the specific context that the Fellows/research participants are working in and can help to elucidate what participants are saying. There are two researchers involved: one is a member of the academic staff within the CLT and the other is both an Institutional Fellow

and has significant engagement with Fellows within and outside of the faculty she works in due to her learning and teaching responsibilities. Both researchers are therefore members of the university and colleagues working with Fellows in responding to the challenges of the pandemic. However, as academics working in different parts of the university and with different responsibilities, there are differences of experience and opinion that have added to the robustness of the analysis.

By recognising the position of the researchers, a space had to be created for all the Fellows to be able to provide authentic details of their own perceptions and experiences and minimise any potential influence of the researchers. Influence that potentially may arise due to any perceptions of power imbalance between the researcher and participant as well as researcher allegiance to the university and desire to have positive results. To mitigate this an online survey incorporating open questions/prompts was created that allowed for participants' responses to be made anonymously and collated according to the individual questions rather than grouped according to the individual to add to the anonymous nature of responses. Confidentiality was assured via a well-respected online survey tool that is commonly used for research investigations and is password-protected. The request for engagement was by email from the CLT to all 62 Fellows allowing for further 'distance' from the researchers whilst including participant information material, which was repeated within the online survey. Engagement was entirely voluntary and participants were given the opportunity to withdraw their contributions within a 14-day time frame.

Prior to undertaking the research ethical approval was secured. All research was conducted in line with the university policy (Edge Hill University, 2020) and adhered to guidance as laid out by BERA (2018) in recognition of the educational context.

The Survey Questions

Within the survey questioning was sub-divided, enabling the data gathering to differentiate the Fellows into those who were already Fellows at the start of the first lockdown and those who chose to apply for Fellowship during the first lockdown. This was in recognition of the jump in applications for

Fellowship during this time in comparison to the same period for the previous year, that is, 20 in 2020 compared to 11 in 2019. Moreover, there were a significant number of applications from colleagues during lockdown who would not normally be expected to apply for Fellowships (7 out of 20). Many of these colleagues are recognised as occupying liminal roles, that is, those colleagues who support academic colleagues in learning and teaching, often particularly linked to technology use. This differentiation between established and new Fellows added a further richness to the data and insight into the Fellowship during this period of change as well as supporting further developments of the Fellowship in the medium-to-long term.

As a result of this we decided to sub-divide the research between the established and new institutional Fellows. The prompts/survey questions that were provided to participants were framed according to the two categories. In both cases the same overarching research question is being addressed, that is, how has the role and influence of a Fellow changed as a result of lockdown and the rapid change to teaching online? This was done by encouraging the participants to recollect their experiences at different points before and during that first lockdown.

Prompts for established Fellows:

1. Describe your perception of role and influence prior to the first lockdown.
2. During that first lockdown how did your role and influence change?
3. During that first lockdown, did your sense of being a member of the faculty and/or university change?

New Fellow prompts:

1. Describe your perception of the Fellowship, its role and function before the first lockdown.
2. Describe how your perception of the Fellowship, its role and function, changed during the first lockdown.
3. How did your experiences and interaction with Fellows at that time influence your decision to become a Fellow?

The survey was disseminated during the second wave of the pandemic and after the introduction of the second national lockdown. Undertaking

research at this time has meant that the considerations of the Fellows were being taken after the dramatic changes in delivery had already been executed in the first semester but whilst there was still an atmosphere of needing to develop skills and expertise for online delivery. Thus, the Fellows were able to reflect on how they had been changed as a result of those experiences rather than being reflexive and reacting to circumstances. In addition, by identifying the timing of the research it recognises that it is a set of perceptions at a particular point in time within a developing and evolving environment.

Following analysis and using an approach similar to that described by Hunter (2012), Braun and Clarke (2013) and Langer (2016) the data were used to create two vignettes to illuminate the process of change and the impact of that process on the changing identities of Fellows according to the length of their experience of Fellowship. This approach enhanced the anonymity of the participants without losing the authenticity of their voice with the use of quotations. This was particularly important given the small data sets, that is, ten established and four new Fellows. Although the data sets are small, they are representative of the total with 24% of established Fellows participating and 20% of new Fellows. Specifically, the vignettes describe how during this extremely challenging period, the role of the Fellowship changed, and recounting 'stories' articulates how our Fellows supported the management of institutional change, while also managing adaptations within their own practice.

Vignette A: The Story of an Established Fellow

I became a Fellow a year or so before the first lockdown. I would say that my role was in some ways vaguely defined, although there were clear expectations from the CLT such as 'to support the CPD Fellowship scheme' and 'to act as an ambassador'. It would be fair to describe the role and influence to be 'a little unknown' as 'I don't think a lot of people in my department knew what a Learning and Teaching Fellow was or understood the role and its purpose'. This would have an impact on what I was able to do and so 'I feel that my influence has been modest' and 'somewhat in the background'. Sometimes I would be 'a go-to person for

pastoral support and advice' or a 'support-mechanism for colleagues developing curriculum'. Each Fellow had been able to develop their role in their own way, and I could see that for some they were 'concerned mainly with (their) own course and practice', whilst others saw it an opportunity to 'innovate in L & T, to model good (best?) practice to colleagues'. Speaking for myself 'I had some ideas I wanted to research, research and dissemination, it was just fitting them into my workload'.

During that first lockdown my role became 'busier and more focused' and '... I felt the need to 'step-up' and get outside of my immediate ... area'. '... plans for TOL (Teaching OnLine) were made front and centre ... and I felt that I could have some direct influence/input on University strategy'. The workload inevitably increased as I was having to 'consolidate institutional level guidance and policy, drawing out frameworks from these which would work departmentally, identifying staff training needs, facilitate training sessions as appropriate etc ...' in other words be fully 'involved in the pivot to online/blended learning'. My role therefore was focused on the 'immediate and pragmatic support for L & T' which included, in some cases, an 'emphasis on reassurance'. There were times when 'colleagues needed to be reminded that the Fellows were not 'techie' support but ...to support pedagogical practice'. 'I gave a lot of time to increasing my knowledge base by undertaking an OU (Open University) qualification ... and participated in two University working parties' as well as supporting colleagues via faculty initiatives.

As to whether my sense of membership of the faculty and/or university has changed as a result of these experiences I'm not sure. Some experiences would lead me to say that strategically it has been 'much more collaborative and collegial amongst colleagues from other faculties'. But in other ways 'I see a lot of Fellows doing a lot more work supporting and guiding other colleagues, but I'm not convinced that the University values them any higher'. Having said that 'I think that the Fellows have a higher-profile in the University' and there is some 'evidence of their influence in the faculty'. Also, I am conscious of some of the tensions between my own intentions as a Fellow and the demands being placed upon me due to the current situation. I hope that things will change in view of all that has been undertaken.

Vignette B: The Story of a New Fellow

I became a Fellow during the summer after the first lockdown. I already had some ideas about the Fellowship, what its role and function were, from before the first lockdown although the specifics were less clear. I would say that my impressions were that it was ‘a positive and collaborative opportunity’ and that there would be spaces where staff with ‘like-minded ideas/values’ would be able to ‘share, collaborate and disseminate ideas/research to the wider community’. To ‘be part of a network to share ideas’, I suppose. Of course, I wanted to ‘develop (my) own professional skills and support others in the process.’ I also wanted to have an ‘opportunity to contribute to faculty and/or university processes’, perhaps to be involved in ‘running staff-development sessions and conference presentations’.

These ideas about the role had come from knowing and having worked with a number of Fellows. They were really helpful as I made the decision to become a Fellow myself. It would be true to say that ‘it was something I was keen on apply for’ because of these prior experiences. ‘I found it beneficial to discuss (applying for Fellowship) with some Fellows before making the (final) decision’. They clarified my understanding and the opportunities that exist. Also, I found that I was being encouraged to apply, particularly ‘as I had been supporting staff with the move to online’. As I had those discussions with Fellows, I found out more about ‘the contributions made by Fellows’ and ‘felt that I too would like to be a part of (the Fellowship) and contribute my skills and knowledge too’.

Since becoming a Fellow, I would say ‘I am more aware of the roles. Staff have needed more help with the enforced move to online teaching and learning’. Much of this has ‘included feeding into good practice around the move online, through online meetings.’ As my Fellowship was focused on technology enabled practice ‘my perception (of what it means to be a Fellow) has not changed much, only now I can see the real value of this opportunity and more actively engage with Fellows across the University. It has been a very positive initiative during lockdown in allowing Fellows to really share their ideas and expertise’.

Discussion

Before lockdown evidence of ‘transformational leadership’ (Dvir et al., 2002, p. 735) from within the CLT can be seen in Vignette A by the provision of the opportunity for Fellows to pursue their own approach to Fellowship with support, including opportunities for research and to develop and disseminate good practice. A post-heroic concept (Billing & Alvesson, 2000; Fletcher, 2004; Elliott & Stead, 2008; Eslen-Ziya & Erhart, 2015) of leadership is also reflected in the social networks of influence that Fellows developed with other Fellows and colleagues. However, this lack of clarity in their roles, particularly within departments, can be seen to have limited their impact. To some extent this could be said to reflect the incremental organisational improvement environment (Carnerud et al., 2018) and the autonomy that is a feature of the university. Vignette B indicates that there is a shift in understanding of the role which is clearly focused on supporting online learning and there is less breadth in their descriptions of the role when compared to Vignette A.

Findings show the impact of the pandemic lockdowns shifted expectations significantly with established Fellows being looked to for leadership and support by the university and the faculties and fits well with the concept of distributed leadership that allowed for an effective response to the pandemic (Dumulescu & Muşiu, 2021). Whilst there was no requirement for Fellows to become members of university strategic groups or to participate in faculty initiatives, there were direct calls for involvement being made to Fellows via the CLT. Given the circumstances it could be surmised that there was an expectation for Fellows to become involved. Thus, there was a transactional quality (Kark et al., 2018, p. 187) to the request for support with a transformational leadership source. Vignette A shows that for some established Fellows the ability to influence strategy was clearly welcomed and that there will be some disappointment if this is not continued and failure to recognise their contribution could be argued as being a gap in effective leadership as described by Dumulescu and Muşiu (2021).

A further dimension identified in the data reflected Fellows' own need to develop pedagogical practice as evidenced by the OU course. This added to and complemented the range of CPD that was being created and delivered by internal teams and key individuals within faculties. This attitude towards developing one's own pedagogical knowledge and understanding is in keeping with the ethos of the Fellowship and the expectation of self-efficacy (Dumulescu & Muțiu, 2021); an attitude that is recognised through the successful application to the Fellowship.

The data also indicate that a significant factor for all Fellows was their role as first-line responders due to the support they gave colleagues moving to online learning and associated technologies. Moreover, analysis of data presented in Vignette B, being involved in providing support to online learning, became a driver for applying for Fellowship. Notwithstanding that six of the new Fellows were from a department that supported academic colleagues develop the necessary technical skills, Vignette A indicates that there appeared to be a default position for academics to turn to someone that they know and/or could identify with more closely to provide the necessary support.

The longer term findings indicate that there is an ambiguity towards that developed sense of membership of the university and faculty because of the pandemic and lockdown. Inevitably, there has been an emphasis on online delivery and technology which, in some cases, has distracted some Fellows from pursuing their own definition of the role yet also attracted new Fellows to apply, particularly those colleagues in learning and teaching support roles. Looking forward, there is a disparity about future expectations between the established Fellows and those who are new. Our findings suggest that the new Fellows appear to expect that their role will continue as it is now, with opportunities for the support of colleagues and the sharing of practice across the university. However, Vignette A shows that for established Fellows there is also a desire to be acknowledged more clearly for the ways in which they have stepped up in managing the change to online and to feel more valued by the university as Fellows. It could be argued that this in itself reflects a change in the professional identity of Fellows and their potential and the fear that they will not be able to fulfil this sense of identity in the future.

Scholarship on Long-term Impacts

As the university moves towards a new-normal beyond the pandemic there are significant opportunities to learn from the experience of working with institutional Fellows. Key to this has to be to acknowledge the significance of the role of Fellow through these times and the shift in their own sense of professional identity to one which can inform and develop strategy as well as support incremental change with colleagues. Where this is the case then the following institutional benefits can be achieved:

- The Fellowship can be utilised to enhance cross-disciplinary collaboration to develop strategy that will focus on institutional learning and teaching priorities as indicated in their participation in strategic working groups at university and faculty level.
- The Fellowship has shown that it is able to develop expertise in learning and teaching in new fields not just for wider dissemination but to provide a research informed basis to HE pedagogy, such as the participation in the OU programme.
- Participation in ‘development-of-practice’ groups at faculty level as well as university professional-development events shows that Fellows can support the wide-scale development of practice.
- Having become recognised as individuals who support the development of practice with individual colleagues this allows for further opportunities to implement innovative practice with academic colleagues.

To reflect this development in the role of Fellows and their sphere of influence it would be anticipated that there would be personal and professional benefits to Fellows, such as the creation of new opportunities—or structured support for—their progression and promotion within the institution and externally.

Concluding Thoughts

From the perspective of the participants in this small-scale evaluation there have been clear institutional benefits from the work of Fellows to create strategy, to implement change within a very short timescale and

whilst they themselves were developing practice—and without any diminution in their other academic responsibilities. To have undertaken these additional roles has depended upon a significant level of goodwill from within the Fellowship. The question that is left is whether their expertise and goodwill in difficult times will pave the way for future developments at faculty and university level that ensure that the ‘new-normal’ is not only about online learning.

References

- Billing, Y. D., & Alvesson, M. (2000). Questioning the notion of feminine leadership: A critical perspective on the gender labelling of leadership. *Gender, Work and Organization*, 7(3), 144–157. <https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-0432.00103>
- Bradford, D. L., & Cohen A. R. (1984) The Postheroic Leader. *Training and Leadership*, 38(1), 40–49. Adapted from Bradford, D. L., & Cohen A. R. *Managing for excellence: The guide to developing high performance in contemporary organisation*. John Wiley & Sons, Inc.
- Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.
- British Educational Research Association [BERA]. (2018). *Ethical guidelines for educational research* (4th ed.). <https://www.bera.ac.uk/researchers-resources/publications/ethicalguidelines-for-educational-research-2018>.
- Carnerud, D., Jaca, C., & Backström, I. (2018). Kaizen and continuous improvement—Trends and patterns over 30 years. *The TQM Journal*, 30(4), 371–390. <https://www.emerald.com/insight/content/doi/10.1108/TQM-03-2018-0037/full/html>
- Dumulescu, D., & Muțiu, A. I. (2021). Academic leadership in the time of covid-19-experiences and perspectives. *Frontiers in Psychology*, 12, 648344–648344. <https://doi.org/10.3389/fpsyg.2021.648344>
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, 45(4), 735–744. <https://doi.org/10.5465/3069307>
- Edge Hill University. (2020). *Research governance and ethics*. <https://www.edgehill.ac.uk/research/governance/>

- Elliott, C., & Stead, V. (2008). Learning from leading women's experience: Towards a sociological understanding. *Leadership, 4*(2), 159–180. <https://doi.org/10.1177/2F1742715008089636>
- Eslen-Ziya, H., & Erhart, I. (2015). Toward postheroic leadership: A case study of Gezi's collaborating multiple leaders. *Leadership, 11*(4), 471–488. <https://doi.org/10.1177/2F1742715015591068>
- Fletcher, J. K. (2004). The paradox of postheroic leadership: An essay on gender, power, and transformational change. *The Leadership Quarterly, 15*, 647–661. <https://psycnet.apa.org/doi/10.1016/j.leaqua.2004.07.004>
- Harrison, R. T. (2017). Leadership, leadership development and all that jazz. *Leadership, 13*(1), 81–99. <https://doi.org/10.1177/1742715016681120>
- Hunter, P. (2012). Using vignettes as self-reflexivity in narrative research of problematised history pedagogy. *Policy Futures in Education, 10*(1), 90–102. <https://doi.org/10.2304/pfie.2012.10.1.90>
- Kark, R., Van Dijk, D., & Vashdi, D. R. (2018). Motivated or demotivated to be creative: The role of self-regulatory focus in transformational and transactional leadership processes. *Applied Psychology, 67*(1), 186–224. <https://doi.org/10.1111/apps.12122>
- Langer, P. C. (2016). The research vignette: Reflexive writing as interpretative representation of qualitative inquiry—A methodological proposition. *Qualitative Inquiry, 22*(9), 75–744. <https://doi.org/10.1177/2F1077800416658066>
- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2021). Reimagining higher education during and post-covid-19: Challenges and opportunities. *Journal of Adult and Continuing Education, 27*(2), 141–156. <https://doi.org/10.1177/1477971420947738>
- SQW. (2011). *Summative evaluation of the CETL programme*. HEFCE. https://dera.ioe.ac.uk/13215/1/rd11_11.pdf



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Academic Innovations in Higher Education during COVID-19: Our Take on the Approaches, Impacts, and Sustainability

Md Golam Jamil and Dawn A. Morley

COVID-19, Disruption, and the Functioning of Higher Education

The COVID-19 pandemic affected universities globally and brought challenges to keep the higher education sector functioning. The task was mammoth and extremely difficult, particularly in transferring traditional face-to-face to distance and online learning activities. The universities responded with three broad curricular approaches: fully online, hybrid or blended, and physically distanced in-class learning (Hodges et al., 2020). However, in all these modes, the major focus was on innovative pedagogic design and technological infrastructure development for enhanced

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student experience (Marinoni et al., 2020). As a result, the universities required to make significant operational changes in education management and staff development.

During the pandemic, universities had to make a quick transition to online and remote learning (Kandri, 2020). The priority tasks included reconfiguring traditional curricula for remote and online environments, ensuring the stakeholders' effective use of learning management systems and other online learning platforms, and helping students and staff with essential digital literacy (Perrotta, 2020). In addition to individual efforts and contributions, research findings, such as Iglesias-Pradas et al. (2021), show strengths of organisational readiness, for example, flexibility in decision making, availability of accessible and informal communication provisions, and technical infrastructure and support in the changed situation during the pandemic. Fortunately, the massive efforts given by individual staff and universities were recognised by many students. A large-scale study within Australian higher education institutions shows several areas of student satisfaction, such as efficient time management, low pressure and flexibility in assessments, and better learning outcomes (Martin, 2020).

Academic Innovations as a Means for Survival and Recovery

Academic innovations or, in its simple term, any unconventional approaches or tool for learning and teaching, carry both risks and benefits for students, faculty members, support staff, and institution leaders. On the one hand, they can address fresh educational needs, supply richer perspectives about educational processes, and facilitate enhanced learning environments. On the other, new educational models, unfamiliar technology, and novel approaches to student support through innovations can lead to complex educational processes resulting in stakeholders' low learning achievements and satisfaction. Community engagement, an integral part of academic instruction, can be hampered if any academic innovation is designed for remote and isolated learning. However, studies, for example, Marinoni et al. (2020), show mixed community

engagement at universities because of their diverse learning cultures and features of academic innovation. Academic innovations can also influence students' engagement and participation in learning activities (Kiesel et al., 2020; Lambert & Lavin, 2021).

It is plausible that the principle aim of any academic innovation is to facilitate more effective learning experiences by replacing existing practices which sometimes can be an unnecessary and less-successful effort. The problems can intensify in any unusual learning environments, for example disruptions and a sudden change of instructional methods. COVID-19 enabled, encouraged, and forced universities across the world to implement academic innovations in wider curricula as well as specific pedagogic practices to continue student learning. This book captures a number of educational initiatives, which we consider as academic innovations, implemented at universities in various educational settings. A systematic evaluation of these innovative approaches and their critical narration in the form of case studies help understand both the benefits and disadvantages of academic innovations in a rational manner.

The case studies detailed in this book show the importance of whole university initiatives and course level interventions in creating agile learning environments. Examples of university-wide actions include revisiting traditional higher education boundaries in relation to the expectations of any changed teaching and learning environments (Chaps. 3, 9, and 10), exploring options and strategies for successful pedagogic practice (Chap. 31), and the consideration of wider establishment of student support provisions (Chap. 41). We have seen how homegrown support mechanisms helped student learning in disruptive environments. For example, the Skills Immersion Project presents a model for student support through combining academic skills development services and resources (Chap. 44); and staff buddy system, an innovative approach to staff collaboration, for enabling enhanced assessment practice (Chap. 36). Creating effective learning environments require to include the entire workforce in the change process. This includes an ongoing support system for both established and precarious academic staff members (Chaps. 22 and 47), and recognition of their professional struggles and achievements (Chap. 24).

Similar to the whole institution initiatives, several course level interventions by the faculty members exhibit independent endeavours for creating effective learning and support opportunities. For example, in business programmes, the faculty members used learning logs, virtual case studies, and online response tools that ensured student voice and supplied deep learning (Chaps. 18, 28, and 39). We also notice academic innovations in other disciplines and subjects, for example, micro-teach as an instructional method for educating frontline healthcare professionals (Chap. 38), virtual experiments and pre-lab activities in Chemistry (Chap. 26), interdisciplinary student teams in a work-integrated learning programme (Chap. 14), interactive design studio in Landscape Architecture (Chap. 32), and a collaborative online reading tool in History (Chap. 29). Although these course-specific innovations appear as small-scale interventions, they have transferable features in areas of student engagement and meaningful interaction with the learning content and peers. However, both the whole university and course-specific innovations demand essential contextualisation aligned with the features of target university cultures and respective academic programmes.

We observe varied responses, 'from having no response through to social isolation strategies on campus and rapid curriculum redevelopment for fully online offerings', by universities across borders during the pandemic (Crawford et al., 2020, p. 9). With a specific attention to academic innovations, the chapters in this book capture three vital features of these transitions.

Firstly, and as expected, the use of technology emerged as the most influential driver in enabling innovative approaches to teaching, learning and student support activities. The innovations have been implemented mainly through existing infrastructure and online platforms showing technology readiness of many universities in operating remote learning. During pre-COVID times, online learning was covering only 2% of the global higher education sector (Bhagat & Kim, 2020), but the pandemic forced the sector to use their technological resources and provisions to go online within a very short period of time. Moreover, the pandemic was a test of digital agility in higher education which appears as a key strength to recover and sustain during academic disruptions (Zhaohui, 2020).

The chapters report examples of using technology for facilitating academic practice through various information and communication tools like Zoom, cloud simulation, and online design studio (Chaps. 30 and 34). They also discuss how technology expands student learning, such as in virtual placement environment (Chap. 33); and extends academic support and community sense through YouTube screencasts, eMentoring, and virtual space for user-generated and shared content (Chaps. 16, 27, and 42). Contrarywise, possible inequality between faculty members and students in terms of teaching delivery and learning emerges as a challenge (Chap. 6). Resource constraints, especially at universities in developing countries, are also identified as an influential actor that hinders technology-enhanced learning (Chaps. 23 and 37). It becomes obvious through practical actions captured in the case studies that converting traditional learning content to online learning is not enough for academic innovations, rather the process requires involving practical pedagogic designs as well as applied digital skills of the stakeholders.

Second, the academic innovations placed a strong emphasis on student and staff wellbeing during the COVID-19 pandemic. Wellbeing is an area often regarded as an influencing force, not the key determiner in students' learning and staff's professional journeys. However, during the pandemic, the need for paying more attention to mental wellbeing and trust was recognised by many universities (Defeyter et al., 2021). We have learned from student experiences and views that their wellbeing during disruptions can be ensured through the facilitation of autonomy-supportive learning activities, by helping students plan personal learning goals and procedures consciously, and through using digital learning platforms to enable reflection and collaboration to ensure cohesion (Holzer et al., 2021).

The authors in this book explored and gave recommendations on various approaches to student support, for example, through improving academic staff's awareness and capacity in wellbeing (Chap. 45), reconfiguring professional development programmes to ensure social presence and community feeling (Chap. 11), and accomplishing mental health strategies through using existing online platforms (Chap. 5). Self-reflection, awareness building, and effective meaning making through extended support and mentoring are useful methods to support health and

wellbeing (Kennett & Lomas, 2015; Verhaeghen & Mirabito, 2021). In this connection, the use of infographics in Learning Management System demonstrated power to help enable participative dialogue and information dissemination (Chap. 25) and eMentoring as a practical method to improve student retention (Chap. 42). It is plausible that, in the changed scenario of higher education due to the pandemic, many vulnerable students and staff struggled to cope with academic innovations and unconventional educational approaches, thus they required extended wellbeing support from their universities and peers.

Third, international higher education perspectives, more specifically the diverse learning cultures and contextual varieties, have become explicit in the chapters. For example, the chapters supply examples of enthusiastic support from the university leaders on materialising a cross-institutional change project at a British university (Chap. 3), resource constraints and barriers for academic innovations in India and Nepal (Chaps. 6 and 37), developing community and sense of belonging in online learning at an Australian university (Chap. 16), teacher collaboration for holistic teaching at a university in Malaysia (Chap. 43), approaches to maintaining quality assurance of the intended learning outcomes at a university in Saudi Arabia (Chap. 15), expectations and challenges of implementing online learning at Chinese universities (Chaps. 4 and 17), and experience of international communication and cultural exchange between universities based in Thailand and Taiwan (Chap. 8).

During the pandemic, the global universities experienced a dramatic increase in virtual mobility and collaboration through using technology which is a positive step towards internationalisation of higher education (Marinoni et al., 2020). However, the goal and practice need to address issues beyond technology and pedagogy, for example, the availability of learning resources, institutional preparedness, diversity, and inclusion (Cesco et al., 2021). In this regard, the international case studies offer opportunities to learn from different educational settings and geographic locations which has potential to support collective response to the COVID-19 pandemic and strategies for implementation in future educational development endeavours.

Overall, to enable effective learning and teaching at universities amid disruptions, the research-informed case studies reinforce the need for a critical understanding of the roles of associated actors and conditions. Any academic and student support initiatives are expected to be holistic and context sensitive. The academic innovations presented in the chapters are predominantly linked to student learning and development, but it is also important to gather and act on staff learning in such challenging situations. Furthermore, the co-creation of knowledge by staff and students is vital for proposing sustainable academic innovations and their effective implementation.

Approaches to Evaluating Academic Innovations

The chapters in this edited collection are research-informed case studies which contain three useful elements. First, they elaborate contextual backgrounds through a compelling description of the relevant academic and non-academic actors, such as university, academic department, policy, people, and technology. Second, through a brief but clear description of study approaches, methods, and associated ethical issues, they detail the research and evaluation procedures. Third, the chapters provide with useful scholarship on long-term impacts of the academic innovations as well as their transferability and sustainability in the predicted post-COVID world. Written in story-telling tone, but supported by research findings and critical analysis, they create easily accessible narratives of academic innovations in higher education.

The case study authors evaluated academic innovations using a diversity of research approaches and methods. The methodologies can be categorised broadly in the following four types: qualitative, quantitative, mixed, and creative.

First, the authors followed interpretative, grounded theory, phenomenology, and action research approaches to conduct qualitative studies. About half of the studies used interviews for data collection. This included individual interviews (Chaps. 3, 15, and 43), group interviews (Chap.

37), and remote and video-based interviews using Zoom, Skype, and WhatsApp (Chaps. 6 and 45). Authors of other case studies conducted focus groups (Chaps. 10, 30, 40, and 41), analysed their own reflection on personal experiences (Chaps. 18 and 46), qualitative survey questions (Chap. 12), and reflective accounts of the research participants (Chaps. 8 and 38). Three case studies used multiple qualitative data collection tools, namely, a combination of students' assessment submissions and focus groups (Chap. 19), focus groups and interviews (Chap. 21), and interviews and open-ended questions (Chap. 42). Generally, the authors used thematic analysis for critically evaluating the data. They also used rigorous examination of student actions and outcomes (Chap. 28) and narrative scenarios based on practical actions at a university (Chap. 4).

Second, some authors followed quantitative research to explore impacts of academic innovations. In the investigations, they considered principles of grounded theory, ethnography, and interpretivism. Data collection methods included online surveys (Chaps. 5, 16, 23, and 34), semi-structured questionnaire (Chap. 24), combination of closed and open-ended questions (Chaps. 7 and 25), and online survey supported by prompts (Chap. 47). Generally, the sample sizes in these studies may not be seen large enough for statistical robustness, but they supply several thought-provoking findings which can be explored further for gaining firm conclusions. However, the authors have demonstrated a strong research base through addressing associated ethical considerations, maintaining quality of the data in careful manner, and analysing the findings ensuring critical and systematic procedures.

Third, the authors combined various qualitative and quantitative research methods to explore their research questions. Their data collection tools included survey and interviews (Chaps. 13, 17, 35, and 44), survey and focus groups (Chaps. 11 and 26), survey and self-reflection (Chap. 27), and evaluation of survey and open-ended questions (Chap. 33). A few case studies combined more than two methods, for example, course documents, course surveys, and student reflections (Chap. 14), and survey, interviews, and observation of student activity and assessment (Chap. 29).

Fourth, in addition to the commonly used qualitative, quantitative, and mixed methods research, some authors employed creative approaches

to investigation. These include a qualitative longitudinal study using photos of workspace at home (Chap. 9), auto-ethnography (Chap. 22), a comparative exploration through interviewing two opposite groups of research participants (Chap. 31), analysing organisational records and document artefacts (Chap. 36), and using a questionnaire after seminar delivery (Chap. 39). Two case studies also show unique approaches to using technology, one with a synchronous in-class poll (Chap. 32) and the other through collecting staff and student comments in forums as well as analytics from the Learning Management System (Chap. 20).

The case studies suggest several key learning points linked to disruptive educational environments, and they also appear as powerful tools to be considered in traditional face-to-face academic settings. However, the academic innovations were mainly emergency measures and their evaluation involved short timeframe and limited research participants. Therefore, the findings may require revisiting if the interventions are continued for long time.

Overall, the research methods used in the case studies supply useful evidence on the features and implications of academic innovations. The findings have been successful in facilitating two domains of scholarship: evidence-based scenarios through real-world case studies and critical evaluations of educational qualities through research-informed discussion. The discussions collectively trigger cross-disciplinary, transnational, and multi-cultural viewpoints and fresh academic perspectives. In addition to the great value of documenting academic innovations and associated research findings, they demonstrate the authors' and research participants' great motivation to contribute to the research schemes in a very challenging time.

An Overview of the Learning Points from the Five Edited Collection Sections

The research-informed case studies offer useful learning points which help frame the following practical guidelines on designing and implementing remote learning in disruptive educational situations.

Section 1: Taking an Institutional Perspective to Learning amid Disruption

1. Dependent on location, culture, and socio-economic background, students experienced a digital divide between those with access to the internet and technological resources and those who didn't (Chaps. 2, 4, and 6).
2. In order to respond flexibly to the pandemic, some universities challenged traditional structures and hierarchies to support new, flexible, and collaborative solutions (Chaps. 3 and 10).
3. Universities recognised that mental health support of students (Chap. 5) and international exchange (Chap. 8) would need to continue in a different format due to social distancing.
4. Social presence and relationship building were found necessary in technological approaches to managing learning in lockdown (Chap. 11).
5. The change to online learning, and potentially unfamiliar learning tools, necessitated professional development of staff (Chaps. 7, 9, 10, 12, and 13).

Section 2: Redesigning Whole Programmes to Meet Challenges of Remote Learning

1. The management of the online pedagogy and personalised learner engagement (Chaps. 14, 21, and 24) was assisted through careful university staff preparation (Chaps. 14, 17, 18, 22, and 23).
2. Connectivity and ensuring the stability of online platforms were critical to equitable learning (Chaps. 14, 17, and 18).
3. Faculty members' cultural awareness and active presence in teaching were required in online and remote learning (Chap. 15).
4. The use of additional online learning tools, for example polling, can aid a constructivist learning approach (Chaps. 18, 21 and 24).
5. For some students, the pandemic provided a real-world learning environment for their development (Chaps. 16 and 19).

6. Changes to pedagogy were often underpinned by existing theory, for example, Networked Learning (Chaps. 20, 23, and 24).

Section 3: Focusing on Pedagogic Design in Remote and Blended Curricula

1. Student engagement was vital in academic innovations (Chap. 28), which increased through theory-laden, authentic, and inclusive pedagogic plans (Chap. 31); and scaffolding with elements of cultural diversity (Chap. 32).
2. Remote learning facilitated teamwork, communication, and leadership, but ensuring them required mentorship and continuing support (Chap. 33). A collective approach to using various methods also helped (Chap. 29).
3. Content, community, and facilitator played important roles in the delivery of online learning (Chap. 35); and professional development was the heart of implementation of technological innovations (Chap. 30).
4. The move to online learning accelerated the rise in microlearning tools, for example, infographics (Chap. 25) and screencasting (Chap. 27).
5. Traditional, practical teaching, for example, experiments, was broken down into microlearning steps (Chap. 26).
6. Virtual learning exhibited powers to challenge the traditional view that applied academic subjects need to be solely face to face (Chap. 34). However, technology-enhanced and only online learning did not replace face-to-face instruction fully (Chap. 30).
7. Remote learning created challenges for students, such as lack of interaction and isolation leading to learning dissatisfaction (Chap. 34).

Section 4: Restructuring Assessment and Feedback for Online Pedagogies

1. Staff teamwork and reflection helped ensure quality of the assessment practice (Chap. 36).
2. In remote and online environments, reflective practice appeared as a practical approach to professional learning and development (Chap. 38).
3. Virtual case studies helped students understand learning content and prepared them for assessment, but the tasks needed to be differentiated in line with the targeted learning outcomes and capacity of students (Chap. 39).
4. The risks associated with remote assessments can be minimised through creating learning environments based on clear policies and their effective dissemination (Chap. 37).

Section 5: Supporting Student Learning and Wellness in Lockdown

1. In educational disruptions, students suffer from multi-source of stress, therefore faculty members and academic leaders should pay attention to students' social-emotional needs and mental health issues (Chap. 43).
2. Academic innovations should be based on students' needs and led by empathy and flexibility, particularly while using any new technology (Chap. 45).
3. When offering an online delivery, considerations should be given to students' access to IT and home resources (Chap. 40).
4. Students appreciated regular communication and empathy from their tutors (Chap. 41). Targeted and segmented approach to communications can support them effectively (Chap. 40).
5. Universities can consider some online and remote learning provisions in the face-to-face curricula which may prepare staff and students for continuing learning in disruptive situations (Chap. 42).

6. Skills-integrated tasks can supply transferable and sustainable competences to students (Chap. 44). Similarly, faculty members can be benefited through cross-disciplinary collaboration with a focus on institutional learning and teaching priorities (Chap. 47).
7. New forms of partnerships between academics and educational technologists are essential to deliver effective online and remote learning (Chap. 45).
8. Higher education leaders should take a long view in operating universities during disruptions. They are expected to be creative and open to change (Chap. 46).

Our Take on Academic Innovations for Creating Agile Learning Environments amid Disruptions

This edited collection presents the higher education response to COVID-19 across a diversity of international universities. Despite their lack of homogeneity, global universities were presented with the common goal of pivoting their student learning to an online format. This strategy had been previously recognised as a successful higher education response in times of global crisis (Al-Baadani & Abbas, 2020; Dhawan, 2020) and the university focus remained constant on students continuing their studies, despite the challenges of learning at a distance during a global pandemic.

The success of the move to online learning, and the ability of universities to teach innovatively across this new medium, was highly dependent on existing resources and the familiarity of teaching and learning online. The pandemic exposed a digital divide between areas of the world, and between socio-economic groups, where accessibility to the internet was poor or where facilities were shared or scarce. This has grave long-term implications for both universities and students already vulnerable in the higher education sector.

For the first time, technology giants of the private sector, such as Microsoft, became central to higher education delivery by the whole scale

adoption of platforms such as Teams and Zoom for online classes and meetings. Many chapters discussed the recognised differences between online and face-to-face learning and again, if the online medium was new to their experience, authors presented how they themselves had to learn to quickly teach online. Some academics started from basics, while others were supported and fast tracked so their expertise grew quickly in learning environments that were set up for rapid change. It was these academics who were in the best position to innovate—once online accessibility and their own confidence in online learning were secured.

Irrespective of HEIs' position in their elearning journey, there was a recognition of the importance of pastoral support for both students and academics at a time of great disruption. This emphasis came across strongly in the chapters and particularly Section 5. The reduction in the social element of learning face to face was apparent and authors looked for innovative work arounds to achieve some semblance of the pre-COVID classroom connection. This emphasis on pastoral support within the chapters was in contrast to the smaller number of submissions for Section 4 on assessment and feedback—up to this point, the more traditional dominant subject area in higher education pedagogy.

During the pandemic in the UK, young people were more likely to experience a higher rate of mental health issues than the general population whilst children, yet to consider their post school options, have missed significant periods of education which has affected disproportionately those from more disadvantaged backgrounds (Suleman et al., 2021). Globally, the emotional, financial, and health consequences of a 'COVID generation' have yet to fully impact higher education.

Long-term academics working with students who have been disrupted by COVID-19 during their formative 16–18-year-old education are right to suspect that the consequences of lockdown may require enhanced support and engagement strategies in higher education (Pownall et al., 2022). Increased student need, however, must now be delivered by a changed university workforce who have adapted, and saw the worth of, to working remotely. Many academics are now less available for both face-to-face delivery for students and the mentoring of less experienced colleagues, so new models of workforce planning may necessarily emerge.

As a result of the pandemic, academics and students have been catapulted into online learning despite many years of resistance. Blankenberger and Williams (2020) brokered the idea, early in the pandemic, that COVID-19 may act as a catalyst for a new order and ethos in higher education learning. Although it is difficult to view such a dramatic change at the present time, online learning is now a regular rather than unusual part of university learning. Out of necessity, most academics and students have the familiarity and skills to participate in online teaching sessions.

An investigation of early, higher education publications related to COVID-19 in Chap. 2 identified two types of online adoption: first level (a competent, foundational level in the use of online platforms) and second level (more innovative design and sustainability of the curriculum in an online and distanced context). Chapters in this edited collection bore out this differentiation with authors moving to a second-level pedagogic design when support matched their own confidence and experience in the online medium. Sometimes the context of the pandemic drove more innovative change, and this was seen particularly in vocational degrees, where the pandemic itself became the real-world learning environment (Morley & Jamil, 2021) for students such as nurses (Chap. 19) and journalists (Chap. 16).

Hybrid and blended are now familiar terms in higher education delivery, but it is important to recognise that most online responses to the pandemic were set up in a hurry as a response to 'emergency remote education' and 'pandemic pedagogies' (Williamson et al., 2020, p. 108). Although Guppy et al. (2022) predict the blossoming of hybrid education as opposed to fully online models, the challenge for higher education is now not to be complacent that their long-awaited move online. Many authors have testified that their short-term solutions did not undergo the quality and rigour of curriculum design that looks horizontally and vertically across students' development over the length of a programme of study. The usability of quality, long-term eLearning change also rests with the personal circumstances of the student and whether new pedagogies present a good fit with students' post-pandemic lifestyle and commitments (Guppy et al., 2022). Although a significant global step has been made into online education, investment in a future vision, resources, and training are necessary to ensure an ongoing high-quality provision for all students.

References

- Al-Baadani, A. A., & Abbas, M. (2020). The impact of coronavirus (COVID19) pandemic on higher education institutions (HEIs) in Yemen: Challenges and recommendations for the future. *European Journal of Education Studies*, 7(7), 68–82. <https://doi.org/10.46827/ejes.v7i7.3152>
- Bhagat, S., & Kim, D. J. (2020). Higher education amidst COVID-19: Challenges and silver lining. *Information Systems Management*, 37(4), 366–371. <https://doi.org/10.1080/10580530.2020.1824040>
- Blankenberger, B., & Williams, A. M. (2020). COVID and the impact on higher education: The essential role of integrity and accountability. *Administrative Theory & Praxis*, 42(3), 404–423. <https://doi.org/10.1080/10841806.2020.1771907>
- Cesco, S., Zara, V., De Toni, A. F., Lugli, P., Betta, G., Evans, A. C., & Orzes, G. (2021). Higher education in the first year of COVID-19: Thoughts and perspectives for the future. *International Journal of Higher Education*, 10(3), 285–294. <https://doi.org/10.5430/ijhe.v10n3p285>
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 1–20. <https://doi.org/10.37074/jalt.2020.3.1.7>
- Defeyter, M. A., Stretesky, P. B., Long, M. A., Furey, S., Reynolds, C., Porteous, D., et al. (2021). Mental well-being in UK higher education during Covid-19: Do students trust universities and the government? *Frontiers in Public Health*, 9, 436. <https://doi.org/10.3389/fpubh.2021.646916>
- Dhawan, S. (2020). Online learning: A panacea in the time of a COVID-19 crisis. *Journal of Educational Technology*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Guppy, N., Verpoorten, D., Boud, D., Lin, L., Tai, J., & Bartolic, S. (2022). The post COVID -19 future if digital learning in higher education: Views form educators. Students and other professionals in six countries. *British Journal of Educational Technology*, 1–13. <https://doi.org/10.1111/bjet.13212>
- Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. <https://vtechworks.lib.vt.edu/handle/10919/104648>
- Holzer, J., Lüftenegger, M., Korlat, S., Pelikan, E., Salmela-Aro, K., Spiel, C., & Schober, B. (2021). Higher education in times of COVID-19: University

- students' basic need satisfaction, self-regulated learning, and well-being. *Aera Open*, 7. <https://doi.org/10.1177/23328584211003164>
- Iglesias-Pradas, S., Hernández-García, Á., Chaparro-Peláez, J., & Prieto, J. L. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers in Human Behavior*, 119, 106713. <https://doi.org/10.1016/j.chb.2021.106713>
- Kandri, S. E. (2020). How Covid-19 is driving a long-overdue revolution in education. *World Economic Forum*. <https://www.weforum.org/agenda/2020/05/how-covid-19-is-sparking-a-revolution-in-higher-education/>
- Kennett, P., & Lomas, T. (2015). Making meaning through mentoring: Mentors finding fulfilment at work through self-determination and self-reflection. *International Journal of Evidence Based Coaching and Mentoring*, 13(2), 29–44.
- Kiesel, K., Zuo, N., Plakias, Z. T., Peña-Lévano, L. M., Barkley, A., Lacy, K., et al. (2020). Enhancing student engagement in a changing academic environment—tested innovations for traditional classes and online teaching. *Applied Economics Teaching Resources (AETR)*, 2.
- Lambert, S., & Lavin, A. (2021). Higher education: Using academic innovation and student engagement to differentiate your brand in challenging times. *Journal of Education Advancement & Marketing*, 6(1), 73–83.
- Marinoni, G., Van't Land, H., & Jensen, T. (2020). The impact of Covid-19 on higher education around the world. *IAU Global Survey Report*.
- Martin, L. (2020). Foundations for good practice: The student experience of online learning in Australian higher education during the COVID-19 pandemic. *Australian Government Tertiary Education Quality and Standards Agency*.
- Morley, D. A., & Jamil, M. G. (Eds.). (2021). *Applied pedagogies for higher education. Real world learning and innovation across the curriculum*. Palgrave Macmillan.
- Perrotta, C. (2020). Coronavirus quarantine could spark an online learning boom. *The Conversation*. <https://research.monash.edu/en/clippings/coronavirus-quarantine-could-spark-an-online-learning-boom>
- Pownall, M., Harris, R., & Blundell-Birtill, P. (2022). Supporting students during the transition to university in COVID-19: Five key considerations and recommendations for educators. *Psychology Learning and Teaching*, 21(1), 3–18.
- Suleman, M., Sonthalia, S., Webb, C., Tinson, A., Kane, M., Bunbury, S., Finch, D., & Bibby, J. (2021). Unequal pandemic, fairer recovery: The

- COVID-19 impact inquiry report. <https://health.org.uk/publications/reports/unequal-pandemic-fairer-recovery>
- Verhaeghen, P., & Mirabito, G. (2021). When you are talking to yourself, is anybody listening? The relationship between inner speech, self-awareness, wellbeing, and multiple aspects of self-regulation. *International Journal of Personality Psychology*, 7, 8–24. <https://doi.org/10.21827/ijpp.7.37354>
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>
- Zhaohui, W. (2020). How a top Chinese university is responding to coronavirus. *World Economic Forum*. <https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of-online-learning-for-universities/>

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