Lynette Torres · Fiona Salisbury ·
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Sharon Karasmanis · Janice Pinder ·
Caroline Ondracek   *Editors*

Connecting the Library to the Curriculum

Transformative Approaches that Enhance Skills for Learning

Springer

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Foreword

What an impressive achievement this book is! Not only does it stand out in the literature on teaching information literacy competencies to college and university students, but it also advances the field of information literacy significantly. Higher education institutions worldwide would do well to adopt either of the models described within.

Many college-level instructors decry the lack of knowledge their students have about the information world in which they exist and must survive and thrive. Those faculty assume that students should have a sophisticated ability to work with information that they developed during earlier formal education. They express frustration with the students' lack of motivation to research sources of information beyond that one ubiquitous search engine. They report that students generally don't know or even care about the implications of superficial searching. Instructors generally feel that there is not enough time to include this training in their courses.

Integrating information literacy competencies systematically throughout curricula has long been recognised as the ideal way to address these issues. However, there is a historic tension between the entrenched structure of higher education systems and this need to prepare students with strong information-related competencies. These tensions have proven quite difficult to resolve. While the needed information competencies have been identified, there are few successful examples reported that use models based on well-established education theory to integrate them holistically throughout curricula.

Lynette Torres and Fiona Salisbury are highly experienced and knowledgeable practitioners who have successfully engaged in this conundrum. As Research and Learning Skills Lead at Monash University Library, Torres understands what needs to transpire at the organisational, team and individual level for reconceptualising and adopting new practices for the in-curricular development of students' research skills. Salisbury is Executive Director Library and University Librarian at La Trobe University, giving her administrative and institution-wide perspectives on curriculum integration, as well as the implementation of changes needed within libraries and among librarians to enable curriculum integration.

Monash University uses the Models of Engaged Learning and Teaching (MELT) developed by John Willison, an expert in education studies, and La Trobe University

uses its own Library Learning and Teaching Partnership Framework (LLTP Framework). Through discussion of the theoretical underpinnings, practice-based examples from diverse disciplines and thought-provoking implications for librarians' practice, they show how the models can be applied effectively in a variety of fields of study, cultural settings and educational levels. The models are sufficiently flexible so that they can adapt to disciplinary differences and changes in a curriculum, as well as to information needs as they evolve in education and society.

Torres and Salisbury, and their teams, show that an ongoing, sustained and persistent effort can result in the successful integration of information literacy. They have ensured that what their universities have done is both scalable and sustainable, although it is clear that curriculum integration is an extensive and ongoing process. It does not occur quickly or without effort and the willingness to examine and change one's teaching practice. The process is iterative and involves regular modifications that are responsive to student preferences and the effectiveness of learning strategies.

A fundamental premise of the authors is the critical importance of ongoing collaboration between academic faculty and librarians and other staff as *partners*, not merely as *supporters* of faculty work. All of the partners must know the techniques for successfully collaborating and have the propensity to do so. This requires a considerable shift within an institution in how the role of libraries and librarians is perceived. It may also require a shift in how librarians perceive their own roles. These two models provide a common language for all partners to discuss student-centred learning goals.

Interestingly, Torres and Salisbury conducted a qualitative analysis of the contributed chapters to identify common themes. They discuss the essential, but sensitive, issue of transforming libraries and library practice—necessary for achieving what their libraries have so admirably done. These models have not only transformed the libraries, but have removed boundaries in the institution so that the education of students occupies a new 'third space': a neutral space in which all those with a vested interest in student learning can collaborate freely and equally.

The knowledge that librarians will gain from this book can be the basis for comfortable discussion of barriers to student learning. Librarians will be able to confidently engage in productive partnerships with academic faculty and others who are directly involved in teaching in their institutions.

This book is a significant and valuable contribution to our understanding of how to integrate important information literacy and research skills in college and university curricula. That elusive goal of consistently reaching large numbers of students across disciplines seems much more realistic and achievable with the work that Torres and Salisbury and their colleagues have done.

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Chapter 1
Introduction—Revisiting Old Mantras: Transforming the Educative Role of the Library in the Curriculum

Lynette Torres and Fiona Salisbury

Abstract This book was inspired by the need to change the conversation about how academic libraries conceptualise and communicate their educational expertise, and how they add value to learning and teaching in their institutions. For over a decade, staff at Monash University Library (MUL) and La Trobe University Library (LTUL), Australia, have been influenced by the scholarship of learning and teaching to enhance how library skill development programmes connect to the curriculum.

1.1 About this Book

This book was inspired by the need to change the conversation about how academic libraries conceptualise and communicate their educational expertise, and how they add value to learning and teaching in their institutions. For over a decade, staff at Monash University Library (MUL) and La Trobe University Library (LTUL), Australia, have been influenced by the scholarship of learning and teaching to enhance how library skill development programmes connect to the curriculum. Successfully navigating the social and structural norms of our universities to extend our libraries' role in the curriculum is substantially attributed to pedagogical models that underpin our information literacy (IL) teaching practice. Although we have adopted two distinct models to guide our practice in this regard, each of these models is robust and theoretically informed. Furthermore, our models have evolved with time, are aligned with higher education skill agendas, have adapted to organisational changes and held firm in times of disruption.

Above all, our models supply the missing link between theory and practice in IL by explaining *what* skills library staff can deliver and enable in the curriculum, and of critical importance, *how* these IL skills can progressively develop within disciplinary

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content. Making the 'what' and the 'how' explicit is significant, as learning and teaching approaches guided by these pedagogical models have enabled library staff to transition from transactional service providers to sophisticated educators. This shift has been pivotal for transforming our libraries' educational practices. In effect, both our libraries have reconceptualised how librarians perceive their role and value within the university, extended their influence to embed IL skill development in the curriculum and importantly, redefined what collaboration looks like in library–faculty teaching partnerships (Salisbury et al., 2012; Torres & Jansen, 2016).

As a result of this shift, we have expanded our teaching capabilities, gained the language to communicate with faculty colleagues and kept the library visible and responsive to emergent skill agendas that enhance student learning outcomes. The result of reconceptualising our teaching practice is effecting lasting and transformative change by repositioning our libraries as key stakeholders in the student learning space. We have forged a new path along which cross-institutional collaboration has become visible, and the library's leadership role in enabling students' IL skill development in the curriculum has widened. This book shares practice-based examples illustrating this change.

Distinctively, this book consolidates knowledge in several pertinent areas that are highly relevant to educators, including establishing library–faculty partnerships, explicitly and coherently developing students' IL skills within disciplinary content and transforming perceptions of the educative role of academic libraries. The practice-based examples in this book provide practitioner narratives that demonstrate how our models inform embedded IL teaching practice and curriculum design to enhance the student learning experience.

1.2 Rationale

Definitions of IL and what this skill set entails is long contested in the library literature, as a result, different interpretations and categorisations of IL abound (Sample, 2020). The most commonly used definition describes the information literate individual as successfully performing a range of skills to effectively engage with information (ANZIIL 2004; ACRL 2015; SCONUL, 2011). One benefit of a skills-based definition is that it offers a clearly identifiable set of outcomes for teaching (Sample, 2020). The problem discussed and debated internationally throughout academic libraries for several decades, however, is how to frame and connect IL skills meaningfully to disciplinary content (Bruce, 1994; Moselen and Wang 2104; Corrall & Jolly, 2019; Dawes, 2019). The preference has largely been to establish integrated teaching and learning approaches supported by library–faculty teaching partnerships to bring library skill development programmes closer to the curriculum (Callan et al., 2001). However, this has not been without its challenges. Despite ongoing strategic efforts undertaken by academic libraries globally, establishing traction in the curriculum, so, the library can make a difference to student learning outcomes remains more often

than not the exception rather than the rule (Corrall & Jolly, 2019; Dearden et al., 2005; Helfrich, 2013; Mileham et al., 2001).

The tools available to guide IL practice include national and international standards and frameworks (CAUL, 2001, 2019; ANZIIL, 2004; ALA, 2000; ACRL, 2015; SCONUL, 1999, 2011), and these documents are continually extended and refreshed to reflect changing terminologies, concepts and understandings. While the intention is to assist with programme implementation (Bundy, 2004; Doskatsch, 2002; Martin, 2013; Sample, 2020), in our observation, consistent use of these practice models has not always been able to be sustained by academic libraries. This limits their relevance to the curriculum. In addition, the nomenclature and jargon associated with defining IL in the literature perhaps suggests a level of confusion as to how librarians articulate IL skills and process concepts. At times, this has led to a cluttered discourse symptomatic of the issue at hand (Becker, 2018; Sample, 2020), and sustainably embedding IL skills in the curriculum continues to be problematic for many libraries. Remaining responsive and relevant to student learning in an ever-changing educational landscape demands more of libraries than a continued effort focussed on reinventing IL.

What is required is a single constant; a flexible, adaptable pedagogical model to guide library teaching practice and transcend library-centric interpretations of IL. The importance of this is even more significant in a rapidly changing higher education sector, where the student population is diversifying, and teaching and learning cannot be separated from digital transformation. This suggestion does not diminish the strong institutional imperatives for libraries to embrace change (Llewellyn, 2019), but rather reinforces the notion that foundational educational theory needs to be a constant alongside ongoing change if libraries are to successfully embed IL in the curriculum. However, also crucial to success is partnership with faculty to enable access to the curriculum and reach students in a relevant and meaningful way.

1.3 Who Owns the Curriculum?

Because building students' IL skills for research and learning remains a current issue in higher education, academic libraries have an opportunity to transform their educative role, align the library within the educational priorities of the institution and provide leadership in this regard (Pinfield et al., 2017). But in taking up the challenge presented by this opportunity, librarians should ask themselves an important question: *Who owns the curriculum?* Asking this question disrupts traditional views that library professionals cannot share the curriculum space, particularly in terms of IL and related skill development.

Greater metacognitive awareness is demonstrated by students when skill development is made explicit, at the point of need, and within the context of content knowledge (Hattie et al., 1996). Unless IL skill development is activated in the curriculum, it often remains disconnected and invisible to educators and students alike. Therefore,

the challenge for academic libraries lies in implementing embedded skill development models which constructively align and progressively develop students' research skills as a considered and sustained intention of learning (Salisbury et al., 2012; Smith, 2011; Torres & Jansen, 2016). This suggests more is required than standalone, one-shot IL sessions or individual successful examples of collaboration for skill development that are well documented in the literature. Although these published examples are valid in representing evolving ways to solve a complex problem, such approaches demonstrate individual successes rather than a coordinated, deliberate organisational response to effect lasting and sustained impact in the curriculum. What we advocate, in the practice-based examples shared in this book, is to place IL skills, processes and concepts with a constructivist epistemology informed by the learning theory of constructivism (Biggs, 1996). Constructivism marries learning and teaching, thus guiding educators in how IL learning experiences can become seamlessly woven into the fabric of the curriculum using a developmental approach. As such, the skills required by the learner to critically engage with discipline knowledge is experienced at the point of need so new skills and knowledge can be constructed by individuals.

The complexity of achieving this goal is compounded by the fact that many libraries do not coordinate a curriculum and do not share responsibility for IL with curriculum owners. Such accepted mantras about curriculum ownership can inhibit librarians' agency to fully participate in curriculum design related to IL. In essence, academic libraries require access to the curriculum to achieve their educational strategic aims. There is a lack of literature offering pedagogically sound models to inform and guide library–faculty collaborations for implementing embedded skill development approaches. This has clearly impeded the ability to frame IL curriculum objectives, learning outcomes, learning activities and assessment criteria. To overcome this dilemma and open up a shared educational space, librarians need collaborative teaching partnerships with discipline academics using theoretically informed conceptual pedagogical models. Conceptual models provide a way to embrace new skill agendas and keep the library relevant in changing learning contexts.

1.4 Our Journey

LTUL and MUL started a similar journey around the same time. Both libraries concluded that bridging the library–faculty divide required a robust, theoretically informed model for IL to give relevance and purpose to this skill set as foundational skills for learning. We identified the need for a model that could develop the teaching capabilities and pedagogical knowledge of librarians in order to address the teaching skills gap commonly found in libraries (Bewick & Corrall, 2010; Namaganda, 2020; Schachter, 2020). Our libraries were therefore exploring the same landscape and travelling similar paths, but holding different guidebooks.

1.4.1 MUL—The Models of Engaged Learning and Teaching

MUL has adopted a theoretically informed, empirically researched model known collectively as the Models of Engaged Learning and Teaching (MELT; Willison, 2017) (see Chap. 2). The MELT consists of skill development frameworks on research, work and digital skills. The first of the published MELT was the RSD framework (Willison & O'Regan, 2006, 2018). This framework illustrates skills encompassing the ability to identify information needs, locate, evaluate, manage, analyse and synthesise information and communicate research outcomes. Over the years, the RSD framework inspired several other frameworks. Among these are the Work Skill Development (WSD) framework (Bandaranaike & Willison, 2009, 2018; revised by Monash University Library 2019) capturing skills for work readiness, and the Digital Skill Development (DSD) framework (Torres et al., 2018), describing what it means for students to be digitally literate. The MELT has empowered library staff to open a dialogue with faculty that now explores a rearticulation not only of what research, work-ready and digital skills encompass, but how to enable skill development as a shared endeavour between library and faculty.

1.4.2 LTUL—Library Learning and Teaching Partnership Framework

LTUL created a local model articulated in the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019) (see Chap. 3). LTUL applies the well-established notion of constructive alignment (Biggs & Tang, 2011) to embed IL skill development in curriculum design. This provides a basis for academics, educational designers and librarians to collaborate on embedding IL literacy learning outcomes, learning activities and assessment tasks, and ensuring all these elements are in place and are explicitly connected. As a result, librarians are part of curriculum development and design teams which also include academics, academic skills lecturers, as well as educational designers and developers. Significantly, whether as part of a design team or a more informal collaboration, library staff have become a valued partner in the curriculum design process; in turn, raising the profile of the library team across the university. It has also made other forms of collaborative development possible, such as the creation of online resources to support a subject's intended learning outcomes, activities and assessments.

1.4.3   Collaboration and Shared Responsibility for IL in the Curriculum

Our robust models have situated the library in what Whitchurch (2012) describes as a 'third space' environment where university staff from professional and academic backgrounds are involved in knowledge transfer through collaboration in multi-professional teams that are not part of formal institutional structures. Significantly, the third space responds to narratives of exclusion that can render professional groups invisible. The third space often engenders convergence rather than separation; academic and non-academic activities are not polarised but rather connected in the delivery of student skill development agendas. Our models have been instrumental in providing a way forward for academics and professional staff to collaborate and share the responsibility for developing essential skills for learning as considered aspects of the curriculum. Without sound models, the library–faculty discourse surrounding IL and the relevance of these skills for students to succeed with their studies remains an ongoing debate.

1.5   What Sparked This Book

A chance conversation between MUL and LTUL staff, the editors of this volume, on overcoming the challenging barriers that often prevent library staff from effectively connecting the library to the curriculum, highlighted some interesting synergies between our distinct models for students' skill development. This edited volume shares some practice-based examples from MUL and LTUL and the paths taken to transform and reposition the library in their institutions. The approaches adopted at LTUL and MUL demonstrate the following shared characteristics:

- Pedagogical learning and teaching frameworks informed by theory
- Underpinned by sustainable strategies
- At scale
- Relevant to curriculum design
- Enhances the student learning experienced by and aligned with university teaching strategies/agendas
- Innovative and demonstrates industry leadership, adding value to the sector.

1.6   How to Use This Book

This book is designed to inspire you. We suggest you read Chaps. 2 and 3 first as these chapters are foundational to your understanding of the key characteristics and theoretical underpinnings of the models informing the practice-based examples in this book. Becoming conversant with the pedagogical frameworks adopted by each

of our institutions is fundamental, as this is the first step towards making sense of how these tools have been applied and how you might connect these approaches to your own library and teaching context. Then explore the remaining chapters depending on where your interest lies. In the final chapter, we take a reflexive turn and present the reader with an overarching analysis of the preceding chapters. By exploring the patterns that emerge across the practice-based examples in this book, we are able to draw some conclusions about successful collaborations between librarians and academics, how these connections are fostered and sustained in the complex university environment and the role of theoretical frameworks.

1.7 Terminology in This Book

The terms used by academic librarians to describe the content of their IL teaching practice differs, and as a result, the lexicon within this landscape is vast (Sample, 2020). In recent years, the terminology has evolved to better:

- connect library vocabulary to dominant institutional skill agendas,
- reflect the subtlety of the library teaching focus and
- align with discipline-specific contexts.

As such, the reader will come across a wide range of terms in this book which describe and expand on the concept of information literacy including research skills, learning skills, digital skills and capabilities, information and digital literacies, academic skills, evidence-based practice and disciplinary specific terms such as primary literacies or any combination of these terms. The dominant terms at LTUL are information literacy or information and digital literacies, and at MUL, the dominant terms used are research skills or research and learning skills. The chapters use dominant terms as well as other skill related terminology that aligns with the practice-based example discussed.

1.8 Themes in This Book

Many of the chapters in this book are co-authored between librarians, learning skills advisers and discipline academics (see Biography section for more information). This is testament to how the experience of using pedagogical tools that support our common educational goals has become a bridge connecting library staff and academics in the third space (Whitchurch, 2012). Each practice-based chapter presents an application of one of the frameworks, contextualised within a discipline. The practice-based examples are organised in Parts II–V according to the following themes reflecting the discourse in the literature.

1.8.1   Theme 1 (Part II): Enabling Collaborative Partnerships

This theme explores the importance of structured library–faculty collaboration to align learning objectives and bring the library closer to the curriculum. Partnerships between library and academic educators require common understandings and mutual trust to open conversations about shared learning and teaching objectives to bridge the divide between roles traditionally perceived to be distinct in higher education (Dearden et al., 2005; Olivares, 2010; Walter, 2018). The practice-based examples responding to this theme demonstrate how we are successfully establishing a stronger library–faculty nexus by underpinning and guiding our collaboration with a shared language and pedagogically informed approaches. The results of the collaboration show practical, diverse and sometimes surprising outcomes.

1.8.2   Theme 2 (Part III): Facilitating Curriculum Design Conversations

Enabling skills as explicit elements in curriculum design and teaching practice requires a common language among educators (Salisbury et al. 2012; Torres, 2018). Using practice-based examples shows not only how pedagogical tools have demystified the language around the particular skills relevant in a given curriculum, but how to scaffold these skills incrementally as part of the curriculum design. The application of pedagogical models to inform conversation highlights the skills contributed through library programmes and cements the libraries' impact in the curriculum.

1.8.3   Theme 3 (Part IV): Motivating Students and Developing Skills

Motivating students to learn is reliant on making the experience of learning relevant and meaningful. Activating metacognition through instructional approaches can make students more aware of themselves as learners, and importantly, supports students' ability to transfer skills from one learning context to another (Pintrich, 2002). Our practice-based examples describe how pedagogy applied to IL teaching practice can contribute to students' ability to transfer the skills needed to engage with learning to other areas of study.

1.8.4 Theme 4 (Part V): Contemporary Skill Agendas

Linking IL programmes to contemporary skills agendas in higher education demonstrates that libraries are becoming more strategic and ambitious in their educational efforts (Corrall & Jolly, 2019). To successfully make this leap into contemporary skill agendas, libraries need to go beyond library-centric interpretations of IL, and reconceptualise how these skills, process and practices relate to the repertoire of skills and attributes graduating students should have on completion of their studies (Hill et al., 2016). A novel approach by MUL and LTUL has been to embrace contemporary skill agendas in higher education such as employability and digital skills by extending understandings of how higher order thinking skills underpinning IL can also be articulated as skills relevant to workplace settings and digital contexts.

1.9 In Conclusion

The goal of this book is to demonstrate how it is possible to firmly connect the library to the curriculum and sustain that connection over time. This book describes a theoretical and practical way forward to overcome common and persistent challenges faced by the library sector in establishing its educational role within the university. We share our ways of thinking about and our practice for embedding IL because we believe they transcend ad-hoc library teaching approaches, opening a newly visible skills discourse for a shared curriculum (Salisbury et al. 2012; Torres & Jansen, 2016).

While this book is written primarily for academic librarians, we expect and hope, it will also prove useful to faculty academics and the many campus professionals involved in contributing to students' skill development. Our premise is that cultivating and underpinning cross-campus partnerships with theoretically informed models provides the means to establish common interests and educational goals. As such, the right environment can bring the scholarship of teaching and learning to the library–faculty partnership to create a shared and more impactful response in the curriculum.

Finally, should you wish to discuss the models and approaches we share with any of the editors or contributors to the book, we are all available for further conversations. We hope our stories stimulate, inspire and motivate you to take a risk and apply transformative pedagogical models to your teaching practice to leverage your expertise and better connect your library to the curriculum.

References

American Library Association. (2000). ACRL standards: Information literacy competency standards for higher education. *College & Research Libraries News, 61*(3), 207–215. https://doi.org/10.5860/crln.61.3.207

Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). *Australian and New Zealand Information Literacy Framework: principles, standards and practice (2nd ed.).* A. Bundy (Ed.). Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Association of College and Research Libraries. (2015). *Framework for Information Literacy for Higher Education.* Retrieved from http://www.ala.org/acrl/standards/ilframework

Bandaranaike, S., & Willison, J. (2009, 2018). Revised by Monash University Library, 2019. *Work Skill Development framework.* Retrieved from https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf

Becker, B.W. (2018). Information literacy in the digital age: Myths and principles of digital literacy. *School of Information Student Research Journal, 7*(2). Retrieved from http://scholarworks.sjsu.edu/slissrj/vol7/iss2/2

Bewick, L., & Corrall, S. (2010). Developing librarians as teachers: A study of their pedagogical knowledge. *Journal of Librarianship and Information Science, 42*(2), 97–110. https://doi.org/10.1177/0961000610361419

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education, 32,* 347–364.

Biggs, J. B., & Tang, C. S. (2011). *Teaching for quality learning at university* (3rd ed.). McGraw-Hill Education.

Bruce, C. (1994). Portrait of an information-literate person. *HERDSA News, 16*(3), 9–11.

Bundy, A. (2004). *Australian and New Zealand information literacy framework: principles, standards and practice.* Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Callan, P., Peacock, J., Poirier, J., & Tweedale, R. (2001). Practice makes information literacy perfect: Models of educational collaboration at QUT. In J. Frylinck (Ed.), *Partners in learning and research: Changing roles for Australian technology network libraries* (pp. 1–18). University of South Australia Library.

Corrall, S., & Jolly, L. (2019). Innovations in learning and teaching in academic libraries: Alignment, collaboration, and the social turn. *New Review of Academic Librarianship, 25*(2–4), 113–128. https://doi.org/10.1080/13614533.2019.1697099

Council of Australian University Librarians. (2001). *Information Literacy Standards.* Canberra: CAUL.

Council of Australian University Librarians. (2019). *Digital Dexterity Framework.* Canberra: CAUL. Retrieved from https://www.caul.edu.au/sites/default/files/documents/digital-dexterity/digdex2019framework.pdf

Dawes, L. (2019). Through faculty's eyes: Teaching threshold concepts and the framework. *Portal: Libraries and the Academy, 19*(1), 127–153. http://dx.doi.org/https://doi.org/10.1353/pla.2019.0007

Dearden, R., Dermoudy, J., Evans, C., Barmuta, L., Jones, S., Magierowski, R., Osborn, J., Sargison, J., & Waters, D. (2005). Aligning information literacy with the faculty teaching and learning agenda. *Australian Academic and Research Libraries, 36*(4), 138–152.

Doskatsch, I. (2002). Australian and New Zealand institute for information literacy (ANZIIL): New body to champion information literacy. *Australian Academic and Research Libraries, 33*(2), 113–116. https://doi.org/10.1080/00048623.2002.10755187

Doskatsch, I. (2003). Perceptions and perplexities of the faculty-librarian partnership: An Australian perspective. *Reference Services Review, 31*(2), 111–121. https://doi.org/10.1108/00907320310476585

Hattie, J., Biggs, J., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research, 66*(2), 99–136. https://doi.org/10.3102/00346543066002099

Healey, M., & Jenkins, A. (2009). *Developing undergraduate research and inquiry.* The Higher Education Academy. Retrieved from https://s3.eu-west-2.amazonaws.com/assets.creode.advanc

ehe-document-manager/documents/hea/private/developingundergraduate_final_1568036694.
pdf

Helfrich, S. (2013, May 31). *A look toward the future: Re-framing information literacy instruction.*
[Paper presentation]. Holmesglen Higher Education Conference—Quality Teaching: Investing
in the Future, Melbourne, Australia. http://holmesglen.intersearch.com.au/holmesglenjspui/han
dle/20.500.11800/78

Hensley, M. K., Shreeves, S. L., & Davis-Kahl, S. (2014). A survey of library support for formal
undergraduate research programs. *College and Research Libraries, 75*(4), 422–441. https://doi.
org/10.5860/crl.75.4.422

Hill, J., Walkington, H., & France, D. (2016). Graduate attributes: Implications for higher education
practice and policy: Introduction. *Journal of Geography in Higher Education, 40*(2), 155–163.
https://doi.org/10.1080/03098265.2016.1154932

La Trobe University Library. (2019). *Library Learning and Teaching Partnership Framework.*
Melbourne: La Trobe University. Retrieved from https://doi.org/10.26181/6051815fa87e4

Lave, J., & Wenger, E. (1991). *Situated learning legitimate peripheral participation.* Cambridge
University Press.

Llewellyn, A. (2019). Innovations in learning and teaching in academic libraries: A literature review.
New Review of Academic Librarianship, 25(2–4), 129–149. https://doi.org/10.1080/13614533.
2019.1678494

Martin, J. (2013). Refreshing information literacy: Learning from recent British information literacy
models. *Communications in Information Literacy, 7*(2), 114–127. https://doi.org/10.15760/com
minfolit.2013.7.2.142

Mileham, P., Ruelle, J., & Berry, S. S. (2001). Playing well with others. *Collection Management,
26*(3), 77–87. https://doi.org/10.1300/J105v26n03_08

Moselen, C., & Wang, L. (2014). Integrating information literacy into academic curricula: A profes-
sional development programme for librarians at the university of Auckland. *The Journal of
Academic Librarianship, 40*(2), 116–123. https://doi.org/10.1016/j.acalib.2014.02.002

Namaganda, A. (2020). Continuing professional development as transformational learning: A case
study. *The Journal of Academic Librarianship, 46*(3), 102152. https://doi.org/10.1016/j.acalib.
2020.102152

Olivares, O. (2010). The sufficiently embedded librarian: Defining and establishing productive
librarian-faculty partnerships in academic libraries. *Public Services Quarterly, 6*(2–3), 140–149.
https://doi.org/10.1080/15228959.2010.497468

Pinfield, S., Cox, A. M., & Rutter, S. (2017) *Mapping the future of academic libraries:
A report for SCONUL.* London: Society of College, National and University Libraries.
Retrieved from https://sconul.ac.uk/sites/default/files/documents/SCONUL%20Report%20M
apping%20the%20Future%20of%20Academic%20Libraries.pdf

Pintrich, P. R. (2002). The role of metacognitive knowledge in learning, teaching and assessing.
Theory into Practice, 41(4), 219–225. https://doi.org/10.1207/s15430421tip4104_3

Salisbury, F., Karasmanis, S., Robertson, T., Corbin, J., Hulett, H., & Peseta, T. (2012) Transforming
information literacy conversations to enhance student learning: New curriculum dialogues.
Journal of University Teaching & Learning Practice, *9*(3). https://ro.uow.edu.au/jutlp/vol9/iss3/4

Salisbury, F., Yager, Z., & Kirkman, L. (2012). Embedding inquiry/research: Moving from a mini-
malist model to constructive alignment. [Paper presentation]. 15th International First Year in
Higher Education Conference: New Horizons, Brisbane, Australia. Retrieved from http://fyhe.
com.au/past_papers/papers12/Papers/11A.pdf

Sample, A. (2020). Historical development of definitions of information literacy: A literature review
of selected resources. *The Journal of Academic Librarianship, 46*(2), 102116. https://doi.org/10.
1016/j.acalib.2020.102116

Schachter, D. (2020). Theory into practice: Challenges and implications for information literacy
teaching. *IFLA Journal, 46*(2), 133–142. https://doi.org/10.1177/0340035219886600

SCONUL. (1999). *Information skills in higher education.* Prepared by the SCONUL Advisory Committee on Information Literacy. Retrieved from https://www.sconul.ac.uk/sites/default/files/documents/Seven_pillars2.pdf

SCONUL (2011). *The SCONUL seven pillars of information literacy: Core model for higher education.* Prepared by the SCONUL Working Group on Information Literacy. Retrieved from https://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf

Smith, L. (2011). Monash University Library: A new paradigm for a new age. *Australian Academic and Research Libraries, 42*(3), 246–264. https://doi.org/10.1080/00048623.2011.10722235

Torres, L. (2018). Research skills in the first year biology practical—Are they there? *Journal of University Teaching and Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/3

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council for Undergraduate Research (CUR) Quarterly, 37*(1), 26–33. https://doi.org/10.18833/curq/37/1/9.

Torres, L., McLeod, A., Yazbeck, B., Rayner, G., Skrbis, M., Yates, S., Dickson, N., & Fulton, H. (2018). *Digital Skill Development framework.* Retrieved from https://www.monash.edu/__data/assets/pdf_file/0010/1652437/DSD-22.05.20.pdf

Walter, S. (2018). Communicating value through strategic engagement: Promoting awareness of the 'value of libraries' through alignment across academic, student, and administrative affairs. *Library Management, 39*(3/4), 154–165. https://doi.org/10.1108/LM-09-2017-0093

Whitchurch, C. (2012). *Reconstructing identities in higher education: The rise of 'third space' professionals.* Taylor and Francis.

Willison, J. (2017). The Models of Engaged Learning and Teaching (MELT). Retrieved from https://www.adelaide.edu.au/melt/

Willison, J. (2018). Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching and Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/1

Willison, J., & O'Regan, K. (2006, 2018). *Research Skill Development framework.* Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf

Zanin-Yost, A. (2018). Academic collaborations: Linking the role of the liaison/embedded librarian to teaching and learning. *College & Undergraduate Libraries, 25*(2), 150–163. https://doi.org/10.1080/10691316.2018.1455548

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Part I
The Pedagogical Frameworks

Chapter 2
The Pedagogical Frameworks Adopted by Monash University Library

Lynette Torres and Barbara Yazbeck

Abstract This chapter describes three of the pedagogical frameworks that comprise the Models of Engaged Learning and Teaching (Willison, J. (2017). The Models of Engaged Learning and Teaching (MELT); Willison, J. (2020). The models of engaged learning and teaching: Connecting sophisticated thinking from early childhood to PhD. Springer). Monash University Library (MUL) adopted the MELT to underpin its teaching practice and guide library–faculty teaching collaborations. The MELT include the Research Skill Development (RSD) framework (Willison, J., & O'Regan, K. (2006/2018). Research skill development framework), the Work Skill Development (WSD) framework (Bandaranaike, S., & Willison, J. (2009/2018). Revised by Monash University Library, 2019. Work skill development framework; Revised by Monash University Library 2019) and the Digital Skill Development (DSD) framework (Torres, L., McLeod, A., Yazbeck, B., Rayner, G., Skrbis, M., Yates, S., Dickson, N., & Fulton, H. (2018). Digital skill development framework). The MELT have proved effective and adaptable in a range of disciplines and learning contexts by describing not only what students' research, work and digital skills *are* but *how* they can be explicitly developed as a critical part of learning. Successful application of these models has strengthened and maximised the effectiveness of library–faculty teaching collaborations. This has enabled the library to remain responsive to contemporary skill agendas and as such, catalysed transformative change by repositioning the Library as a key contributor to student learning.

2.1 Background

A core function of the university library is to connect students, academic staff and researchers with requisite information resources to support study and research purposes (Bryant et al., 2020). Although academic libraries are key figures in providing these critical services, the past two decades have seen significant evolutionary change in how libraries perceive their role and the contribution they make

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to core university learning and teaching agendas. Deeply collaborative in nature, academic libraries have drawn on this characteristic to expand their educational role and align their information literacy (IL) skill expertise with student learning in the curriculum.

Motivating libraries to move (IL) more purposefully into the teaching space was prompted by a new focus on undergraduate research initiatives (Boyer Commission 1998), the advent of the library profession's Information Literacy Standards (ALA, 2000; CAUL 2001; ANZIIL 2004) and the introduction of University Graduate Attributes—outcome statements articulating the skills and attitudes graduating students should be able to demonstrate on completion of their studies (Oliver, 2013). A focus on students' skills signalled an opportunity for academic libraries to position themselves more firmly in the educational space. Hill et al. (2016) acknowledge the importance of students having gained a wide repertoire of skills from their studies which can include the following:

> …critical thinking skills, such as intellectual curiosity, analytical reasoning, problem-solving and reflective judgement; effective communication; leadership and teamwork skills; research and inquiry skills; information literacy; digital literacy; personal attributes such as self-awareness, self-confidence, personal autonomy/self-reliance, flexibility and creativity; and personal values such as ethical, moral and social responsibility, integrity, and cross-cultural awareness (p. 156).

Such skills and attributes are considered both fundamental and critical for students to successfully undertake further study, gain employment, participate in and contribute positively to society (Barnett, 2000; Barrie, 2004; Bundy, 2004; Head et al., 2013). This has argued well for academic libraries to seize the opportunity, promote and link their information literacy expertise to the student learning journey to strengthen and maximise the library's contribution to student learning success.

2.2   Positioning the Library in the Educational Space

It is widely accepted that skills related to research coexist within knowledge making practices in the curriculum (Barnett & Ceci, 2002; Brew, 2006, 2012; Healey & Jenkins, 2009; Willison, 2012, 2020). As such, a strong call came from the library profession to champion information literacy and establish collaborative library–faculty teaching partnerships to facilitate access to the curriculum (Doskatsch, 2002; Peacock, 2001). However, as Doskatsch (2003) notes, connecting information literacy and research skill development to student learning can be challenging as 'success in fostering faculty–librarian collaboration depends on establishing common understanding and overcoming preconceptions and perceptions of such a relationship, and the external forces that drive cross-disciplinary collaboration' (p. 111). Although the development of IL was considered by the profession to be as Doskatsch (2003) identifies, 'educationally, professionally and politically desirable' (p. 114), more than a decade on, the literature clearly suggests the same challenges remain (Osborn 2017; Corrall & Jolly, 2019). Bryant et al. (2020) lament that academic

libraries can still be 'burdened by their historical role as a physical repository of print collections' (p. 12). The authors stress that to be considered a key figure in the university's educational landscape, the library 'in turn must communicate clearly to campus partners its full value proposition and expertise, making clear that this value and expertise extends to a broad range of services beyond books' (Bryant et al., 2020, p. 12). It is clear that libraries want to offer a greater contribution to learning and teaching in a rapidly changing global higher education sector, yet as Corrall and Jolly (2019) have emphasised, 'the role of librarians as teachers continues to be contested, questioned and resisted' (p. 114).

Literature in the field of library studies clearly espouses the benefits of embedding students' research skill development within disciplinary content (Bundy, 2004; Olivares, 2010; Torres & Jansen, 2016). It is recognised that this is the most effective way to connect the library's skill development programmes with campus life and institutional educational priorities (Dewey, 2005). The challenge for library educators and discipline academics is how to incorporate and make library skill development programmes a relevant, embedded and coherent part of the student learning experience, and one which considers evolving pedagogy, teaching practice and curriculum design.

Although librarians have endeavoured to respond to the call to 'engineer the metamorphosis from librarian to educator and learning facilitator' with the profession's first edition of the ANZIL Standards in hand (Peacock, 2001, p. 27). Gaining a foothold in the curriculum was not without its challenges. Bundy (2004) identified that what was lacking in the first edition of the ANZIIL Standards was a way for librarians to guide and foster the development of IL skills within disciplinary content. The 2004 edition of ANZIL intended to rectify this, however, library and information studies literature still evidences a continuing struggle to meaningfully connect library IL programmes to skill agendas at the institutional level. Although there would be a number of contributing factors impeding the ability to activate the ANZIL Standards more broadly in disciplinary curricula, one reason could be that ANZIL describes *'what'* information literacy skills are, not *'how'* to activate and scaffold them coherently within learning content. Moselen and Wang (2014) also note that 'very little of [the literature] has discussed how to prepare librarians to become active contributors to curricular design in higher education' (p. 117). Related to this observation, ANZIL uses the language of librarianship rather than the language of educators which may also be a reason why the Standards have had limited reach beyond library audiences.

2.3 Re-envisioning the Library's Educative Potential

To recalibrate how Monash University Library contributes to students' skill development, learning skills advisers were integrated into the library's organisational structure to work collaboratively alongside teaching librarians (Smith, 2011). This new structure enabled the library to assume responsibility for a broad spectrum of skills, challenging historical assumptions of the library's role in the University (Smith,

2011). The success of the initiative demonstrates industry leadership and a model that leverages a way forward for libraries to expand their skill repertoire and engage more directly, purposefully and impactfully in the curriculum.

It soon became apparent, however, that this new partnership required an enabling tool to underpin and guide a reconceptualised library teaching practice. This tool needed to clarify what skills and expertise the librarian and learning skills adviser brought to this partnership, where their areas of knowledge and educational expertise lay, where they differed and where they overlapped. The tool also needed to not only harness the expertise of these educators, but guide and inform a new collaborative teaching structure.

To this end, MUL adopted and implemented the Research Skill Development (RSD) framework (Willison & O'Regan 2006/2018) in 2009, rather than the ANZIL Standards themselves. The RSD framework is a conceptual pedagogical model for guiding students' research skill development in the curriculum. Such a tool made sense in a context where MUL was reconceptualising and expanding its IL skill repertoire to include both research and learning skills. Therefore, the RSD signalled a way to guide how library research skill programmes could be embedded into disciplinary curricula so that the skills students required for researching were not artificially divorced from content knowledge. As such, the RSD heralded a promise to also underpin library–faculty teaching partnerships and in doing so, enable the library to achieve its strategic educational goal of embedding skills explicitly into the curriculum. In alignment with the RSD framework, the library adopted the terms 'research skills' and 'research and learning skills' as this nomenclature was also considered more appropriate to an academic learning environment (Smith, 2011). 'Research and learning skills' also communicate a holistic articulation of the skill expertise of librarians and learning skills advisers. With the RSD in hand, librarians and learning skills advisers had a way to overcome the challenge of how educators from across the university conceive research skills across disciplines. Since adopting the RSD framework in 2009, MUL has successfully enhanced collaborative library–faculty teaching partnerships for the explicit development of students' research skills as considered aspects of learning in a range of disciplines (Torres & Jansen, 2016).

The RSD framework is the first of a suite of skill development frameworks that have been created over the years that have been inspired by the sophisticated simplicity, effectiveness and adaptability of the RSD. The RSD framework together with sibling frameworks explicating work and digital skills respectfully are referred to collectively as the Models of Engaged Learning and Teaching (Willison, 2017). The sections that follow will unpack the guiding parameters of the MELT.

2.3.1 Opening a New Conversation for Students' Skill Development

Discovering the RSD was quite serendipitous, and occurred through a library conference presentation by the creator of the MELT, Dr John Willison in 2008. The RSD framework immediately resonated for a library context, primarily because of its foundational underpinning with the ANZIL Standards (ANZIIL, 2004). The ANZIL Standards have informed the Facets of Research in the RSD framework. By overlaying the ANZIL Standards with Bloom's Taxonomy (Bloom et al., 1956), the RSD has essentially breathed life into the ANZIL Standards. Furthermore, the RSD framework has provided librarians with an important missing link—that is, by guiding educators as to what information literacy skills are and how they can be activated in library skill development programmes. This is significant because as early as 2001, the international library sector was lamenting that teachers and students alike did not have a 'roadmap' or a 'blueprint' to unpack the concept of IL, adding to the confusion was an understanding of the range of skills involved and as such, hampering their traction in the curriculum (Koch, 2001).

The RSD Handbook disseminated at this library conference included the names of two academics from Business and Economics at Monash University who were applying the RSD framework to their teaching. On contacting the academics with an offer to meet, there was great interest from both parties to learn about each other's interest and application of the RSD framework. The academics were keen to hear why the library was considering the RSD, and we, at the library, were keen to learn how the RSD framework was being applied in a disciplinary context. At our meeting, we placed the RSD framework as a conversation piece between us on the table. The conversation the RSD ignited was stimulating, insightful, surprising, extremely productive and positive. The RSD provided the means to have a conversation using a mutually understood language, helping us as library staff to discuss research skill development using the language of educators rather than through library-centric terminology. Centring the conversation around the RSD framework enabled us to discover and describe our common educative goals and our shared trajectory—enabling students to engage with discipline content and succeed in their studies. This meeting over the RSD was pivotal and sparked a partnership which has evolved and continued over the years, the RSD framework providing the foundational structure for the collaboration. This teaching partnership has offered opportunities to pilot and co-create teaching and learning initiatives informed by the RSD, co-facilitate RSD workshops across the university, present at international education conferences and over the years, contribute to funded research on the RSD framework (Willison, 2012; Willison et al., 2010). As the collaboration has progressed and continued over time, different library staff have been involved and have contributed to the collaboration which remains strong today (see Chap. 14 by Gleeson, Junor and Mayson).

2.4　The Theoretical Underpinnings of the MELT

The MELT frameworks are pedagogical conceptual models that individually articulate a range of academic skills and facilitate how Graduate Attributes can be animated in the curriculum. The MELT frameworks consist of three theoretical parameters. The vertical axis describes the 'Skill Facets' presented as verb couplets and informed by Bloom's Taxonomy of Learning (Bloom et al., 1956). The horizontal axis, 'Scope for Student Autonomy', depicts a learning continuum informed by Vygotsky's Zone of Proximal Development (1978), Biggs and Collis' SOLO Taxonomy (1982) and the work of Boud (1988) on learner autonomy. Lastly, the adjectives in italics running alongside each skill couplet or 'facet' capture the affective domain (Krathwohl et al., 1964)—that is, the dominant attitude or disposition of the learner required to develop that skill. What differentiates the MELT frameworks from other skill frameworks is that they are conceptual models that when contextualised, provide a way to distil and scaffold the skills required for complex thinking. This offers library–faculty teaching partnerships a way to address the challenge of making implied skills visible in the curriculum. Therefore, it is through contextualisation and application that the MELT reveal their student-centredness, adaptability, sophistication and richness. Empirical studies applying the MELT in a range of disciplines have shown their potential to guide educators in their teaching as much as guide students in their learning (Torres, 2018; Willison, 2018).

2.5　Unpacking the Parameters of the MELT

2.5.1　The Vertical Axis: Skill Facets and the Concept of the Affective Domain

The vertical axis of each of the MELT frameworks individually describe the skill development associated with that framework, i.e. RSD framework (research; see Fig. 2.1), WSD framework (work; see Fig. 2.2) and DSD framework (digital skills; see Fig. 2.3). In each framework, the reader will notice that the skills are depicted as verb couplets and are referred to as 'facets' (as in the 'facets' of a diamond). This is to give the impression of 'skill clusters' that relate and overlap with one another and importantly, need to be developed in tandem. Each facet is accompanied by a descriptor informed by Bloom's cognitive domain (Bloom et al., 1956). The descriptor is meant to encapsulate the essence of the Skill Facet by describing what the learner is doing at that point of their research (RSD framework), workplace activity/practice (WSD framework) or in using digital technology (DSD framework). A guiding question is also included, which 'unpacks' the facet by personalising and expressing the skill through the 'learner voice'.

Fig. 2.1 The Research Skill Development (RSD) framework. Willison and O'Regan (2006/2018). Reproduced with permission

2.5.2 The Concept of the Affective Domain

The affective domain, defined as values, motivators and drivers (Krathwohl et al., 1964) or as dispositions and attitudes, accompanies the Skill Facets (cognitive domain) of each of the MELT frameworks. The affective domain is represented by an adjective with each Skill Facet. These adjectives describe the positive emotions, attitudes and dispositions most indicative of each facet (i.e. the dominant disposition that describes that skill). The affective domain points to the importance of students recognising and developing attitudes and dispositions for learning together with skills.

Work Skill Development Framework   Creative Commons 4.0

Scope for Student Autonomy

Work Skill Facets	Prescribed Direction — Highly structured directions & guidance from mentor where, the student…	Bounded Direction — Boundaries set by and limited directions from mentor where, the student…	Scaffolded Direction — Demonstrates some independence within provided guidelines, where the student …	Open-ended — Works independently to innovative with limited guidance, where the student…	Unbounded — Works within self-determined guidelines appropriate to context, where the student…
INITIATIVE & GOAL-ORIENTED *What is my role?* Goal oriented and takes the initiative to clarify role, adapt to new situations and identify new opportunities. (MOTIVATED)	Requires a high degree of guidance to clarify role and adapt to new situations.	Requires some direction to carry out role with an awareness of the opportunities it offers.	Establishes role independently and adapts to situations with minimal guidance.	Motivated to fulfil the potential the role offers by exploring new goals and opportunities in a range of contexts.	Determines future goals and projects which create innovative, strategic outcomes. Regularly exceeds potential.
RESOURCEFUL & INFORMED *What do I need?* Makes informed decisions by finding, generating and evaluating information using appropriate technology and digital skills. (DISCERNING)	Finds required information using prescribed technology with a high degree of structure and guidance.	Interprets affordances of technology for finding and generating information and the skills required to use digital tools with limited direction.	Determines the affordances of technology and applies digital skills for finding, selecting and generating context specific information.	Uses a range of technologies and demonstrates adeptness with locating, generating and evaluating information to make informed decisions.	Effectively and discerningly selects, generates and evaluates information and data to make strategic decisions and to stay informed.
LEARNING & REFLECTING *How do I improve?* Reflects insightfully for continuous learning, encompassing inclusivity in diverse work environments. (EMPOWERING)	Requires guidance to develop reflective practices for continuous professional learning that includes understanding inclusivity in the workplace.	Demonstrates some behaviours for continuous learning, recognising the importance of inclusive practices.	Aligns behaviour and learning goals with organisational objectives and protocols, and applies inclusivity in diverse work environments.	Evaluates and reflects on learning with a high-degree of insight to determine professional learning goals. Is committed to behaviours that foster inclusivity in a diverse workplace.	Evaluates and reflects on behaviour and work practices required to achieve a healthy organisational culture, takes responsibility for the intellectual and social development of others.
PLANNING & MANAGEMENT *How do I organise?* Plans, manages, organises self and processes while being perceptive to managing the needs of others. (MINDFUL)	Requires a high degree of guidance to organise and manage self and processes using prescribed structures.	Manages self and establishes clear project goals and deliverables, with limited guidance.	Plans and monitors processes for organising and managing self and others within provided guidelines.	Prioritises time and resources, plans for contingencies whilst managing and organising tasks for self and others.	Determines priorities, directs and articulates strategic vision plans and is perceptive to the needs of others.
CRITICAL REASONING & PROBLEM SOLVING *How do I Solve?* Critically analyses and synthesises to identify problems, consolidate strengths, create solutions and initiate necessary change. (CREATIVE)	Requires a high degree of guidance to identify and understand known problems that have known solutions.	Follows established protocols to understand and find solutions to known problems with limited direction.	Requires minimal guidance to analyse and synthesise problems, using existing knowledge. Recognises the impact of bias on enabling solutions.	Applies critical reasoning to independently solve increasingly complex problems as they arise. Finds innovative and considered solutions for successful outcomes.	Applies sophisticated, evidence-based reasoning to solve problems skilfully and creatively. Demonstrates nuanced understanding of implications.
COMMUNICATION & TEAMWORK *How do I relate?* Communicates with professionalism, interpersonal and cultural sensitivity heeding ethical, cultural social/team (ECST) dynamics. (ETHICAL)	Follows prescribed structures and organisational protocols to communicate within and outside team environments, guided modelling develops awareness of ECST considerations in the workplace.	Some guidance is required to consider other perspectives, exchange information and communicates ideas between inter-professional teams. Shows awareness of ECST issues.	Demonstrates understanding of team dynamics, contributes effectively to common goals. Communicates assertively and confidently; actively listens to others and adapts to ECST practices.	Demonstrates ability to coordinate and socialise diverse teams, communicates complex information effectively and sensitively, cultivates open communication, provides constructive feedback aligned with ECST practices.	Demonstrates leadership of inter-professional teams in culturally diverse settings, clearly communicates goals to generate and meet strategic outcomes. Leads by example to inculcate ECST practices.

For the explicit and coherent development of student employability skills. Bandaranaike, S. & Willison, J. (2009, 2018). suniti.bandaranaike@jcu.edu.au. Revised by Monash University Library, 2019. lynette.torres@monash.edu   www.adelaide.edu.au/rsd/melt/   www.monash.edu/library/skills/rsd

Fig. 2.2 The Work Skill Development (WSD) framework. Bandaranaike and Willison (2009/2018). Revised by Monash University Library, 2019. Reproduced with permission

The inclusion of the affective domain, and associating it with the cognitive skills described in the facets, shifts the focus from a teacher-centred viewpoint to a student-centred one. The role of the affective domain in specific association with the skills and processes of researching has been explored by Kuhlthau (2004). Kuhlthau insightfully draws connections between students' affective dispositions ignited by the uncertainty of charting unfamiliar territory during the process of seeking and using information, and refers to this experience as the uncertainty principle. Kuhlthau (2004) states that.

> Uncertainty is a cognitive state which commonly causes affective symptoms of anxiety and lack of confidence. Uncertainty and anxiety can be expected… confusion and frustration are associated with vague, unclear thoughts about a topic or question (p. 341).

Fig. 2.3 The Digital Skill Development (DSD) framework. Torres et al. (2018). Reproduced with permission

Although the MELT frameworks focus solely on adjectives that describe positive dispositions, by acknowledging the affective domain, they draw the educator's attention to the importance of the range of dispositions and attitudes that are part of an individual's experience of learning. In a library context where the primary orientation of library programmes is to teach students skills for researching, it is important to acknowledge that feelings of uncertainty, anxiousness and frustration also accompany the information seeking process. The MELT frameworks have provided a way to conceptualise how the theoretical principle of uncertainty marries with a constructivist approach to learning. As library educators, being aware of the theoretical principles related to the affective domain in our teaching practice makes us more sensitive to what we need to consider when designing skill development classes.

2.5.3   The Horizontal Axis: Scope for Student Autonomy

The MELT share a horizontal axis, the 'Scope for Student Autonomy', where the degree of learner independence is described in incremental and progressive stages across a learning continuum. Autonomy is widely acknowledged as an important aim in education as increasing self-reliance enables students to gain awareness of themselves as learners and in doing so, take control and responsibility for their learning (Boud, 1988; Bruce, 1994; Butler, 1999; Fazey & Fazey, 2001). As Willison (2018) points out, the facets 'reveal *"what"* skills are and the levels of autonomy show *"how"* to facilitate the facets, by providing a sense of the level of structure and guidance required by students' (p. 4). Student autonomy is described through scaffolded increments across the MELT learning continuum. Willison et al. (2017) note that descriptors guide the educator's intervention by the question: 'How much guidance and space do these students need?' The intention of the autonomy continuum is to build student independence or self-reliance with each skill over time. Autonomy ranges from *Prescribed* guidance where close educator or supervisor guidance is required through to *Unbounded* autonomy where the learner is able to perform activities independently and has the ability to extend the skills as described to new contexts.

Autonomy is a sophisticated concept which acknowledges that skills develop and progress at different rates (Willison et al., 2017). Unlike competency frameworks such as the Australian and New Zealand Information Literacy Standards (ANZIIL, 2004) which suggests learning is unidirectional and can be benchmarked (i.e. whether a student can demonstrate the ability to do something to a certain level or not), the focus of the MELT frameworks is on learning. The Association of College and Research Libraries Framework for Information Literacy for Higher Education (ACRL, 2015) presents a renewed vision by introducing key threshold concepts for information literacy 'to encourage a deeper understanding of what knowledge practices and dispositions an information literate student should develop' (ACRL, 2015, p. 10). However, the ACRL Framework still lacks a developmental view of learning. A learning continuum framed by learner autonomy as captured by the MELT framework acknowledges that students may be positioned at various points on the autonomy continuum in relation to different skills and tasks at any one time. Autonomy depends on context, purpose and learner characteristics.

The scope of autonomy is also fluid in that a single task may shift through varying levels of autonomy as learners build competence and self-regulate their learning (Willison et al., 2017). In this way, the MELT recognises that students may demonstrate varying levels of autonomy for the different skills and that students may oscillate between these skills whilst engaged in a task. A learning continuum informed by learner autonomy recognises that students may at times move backwards when faced with less familiar activities, tasks or concepts that are new to the learner and therefore more conceptually demanding. As explained by Willison et al. (2017), 'this does not mean going backwards educationally, but rather provides insight into what

happens in more conceptually demanding contexts, when students move into unfamiliar territory or when more rigour is required' (p. 3). As noted earlier, this aspect of autonomy is also mirrored in earlier work on information seeking behaviour by Kuhlthau (2004), and is referred to as moving from 'uncertainty to understanding' (p. 340). It is likely, therefore, that a learner will move *along* the continuum with every unfamiliar task.

The MELT makes it possible for an educator to reflect on how much guidance might be required for a particular task or learning activity and 'pitch' or scaffold the activity accordingly. In considering how much space needs to be created by the educator for autonomous learning to take place, moderate autonomy where room is provided for the individual to manoeuvre between dependence and independence, has been considered preferable to having full autonomy (Wielenga-Meijer et al., 2011; Zoghi & Dehghan, 2012). With this in mind, Willison et al. (2017) suggest that 'teachers should facilitate the level of guidance which produces the "sweet spot" for optimum learning and thinking', as such the authors conclude that, 'education generally, and the development of research skills in particular, would progress most successfully for a whole cohort when in this middling educational "Goldilocks zone"' (p. 430).

Therefore, from a teaching perspective (Willison et al., 2017) describe autonomy as a 'tug of war', where the degree of autonomy shifts according to.

> …personal elements and the demands of disciplines, work or required competence. Autonomy is more a relationship between people and their learning environment and less a measurable entity or characteristic that increases unidirectionally: It is more about appropriate levels of conceptual space as each context warrants (p. 11).

Autonomy can therefore be considered as the extent of scaffolding and conceptual space required for optimal learning to take place. Willison (2020) notes that when educators facilitate learning, they 'enhance student metacognition' and students' ability to 'regulate their own learning' (p. 131). An optimal learning environment also acknowledges the interplay and inter-relatedness of affective skills and dispositions for supporting the student to over time, take control of their learning by gradually increasing their self-reliance (Bandura, 1997). As Bandaranaike and Willison (2017) put it, 'engaging in learner autonomy requires a wide selection of personal and interpersonal skills, and a range of cognitive, metacognitive, affective and social skills' (p. 6).

As autonomy descriptors provide educators with a continuum for designing incremental and scaffolded learning activities that make the skills embedded in the activities explicit, the MELT can guide educators in overcoming the predicament of how to chart the developmental progression of student skills. This means the MELT offer a way to teach and assess skills coherently in the curriculum (Bandaranaike, 2018; McLeod & Torres, 2020; Peirce et al., 2009; Pretorius et al., 2013; Torres & Jansen, 2016). This is significant for library skill development programmes, as a scaffolded approach to developing students' research skills in the context of higher education is often overlooked and even neglected by library skill development programmes.

The following section highlights the distinctive elements of each of the MELT frameworks, the Research Skill Development (RSD) framework, the Work Skill Development (WSD) framework and the Digital Skill Development (DSD) framework, that are explored in the practice-based examples in the book chapters that follow.

2.6   The Research Skill Development (RSD) Framework

The RSD framework is designed to explicitly guide the cyclic development of students' research skills (Willison & O'Regan, 2007). While the RSD framework was not created specifically with library programmes in mind, it immediately resonated with MUL when the library sought a pedagogical framework to guide its teaching practice. The RSD connected well to a library context in that it is derived from the ANZIL Standards (ANZIIL, 2004). As such, the RSD framework indicated strong potential to guide teaching collaborations between librarians and learning skills advisers, and in doing so, bring together educators with complementary skills and knowledge for a new organisational teaching structure. Further validating the potential of the RSD framework to guide and underpin the library's teaching practice is Willison and O'Regan's (2007) acknowledgement that in creating the RSD framework, the ANZIL Standards appropriately capture a set of skills (see Table 2.1) that together make for effective and appropriate use of information, considered by the authors an essential part of the research process.

The RSD framework on the other hand, offers a reconceptualised interpretation of ANZIL by overlaying the six ANZIL Standards with Bloom's Taxonomy (Bloom et al., 1956). By explicating these six research skills across a learning continuum, Willison and O'Regan (2007/2018) effectively offer library educators the missing 'roadmap' or 'blueprint' to guide library–faculty partnerships and the way in which the library responds to student learning. Therefore, the significance of the RSD framework is in offering a reconceptualised interpretation of the ANZIL Standards, where information literacy skills are overlaid with and scaffolded progressively across a theoretically informed learning continuum.

While the Skill Facets in the RSD framework are represented sequentially to capture the research process, they are not lockstep or linear. In fact, the RSD recognises that research is not only a recursive process, but a process that can also be messy as the researcher moves back and forth between Skill Facets. The facets make these complex phases of research visible, they suggest a logical pathway through this nuanced process that is both iterative and non-linear. In this sense, the facets are dynamic and adaptable; they share elements of each other allowing for context-sensitive application to research. It is when the facets are contextualised that research skills and the processes associated with research are revealed. Willison and Buisman-Pijlman (2016) emphasise this and also stress that the RSD facets are not:

…generic skills, as this would imply a ready transferability, but rather they are overarching perspectives about the research processes that are common across disciplines. In use, these general descriptions are made real by academics who operationalise them as discipline-specific and context-sensitive descriptors (p. 66).

The adoption of the RSD framework across the university has been led by MUL and has been applied in partnership with academic staff to a range of disciplinary contexts. This includes Law (Hughes et al., 2011), Nursing and Midwifery (Pretorius et al., 2013), Business and Economics (Taib & Holden, 2013), Business Law (Kananatu, 2017), Creative Writing (Wong & Yahya, 2017), Engineering (Karu et al., 2017), Biological Sciences (Torres, 2018). In this volume, the RSD framework is explored in Business Management (see Chap. 14 by Gleeson, Junor and Mayson), in Law (see Chap. 8 by Brabon, Tucker, Pulungan and Lang), in an interdisciplinary master's programme in Environment and Sustainability (see Chap. 5 by Castillo and Ho), in a Nursing master's unit (see Chap. 12 Turner, Young, Freeman & Zahora) as well as Business and Economics at Monash University Malaysia (see Chap. 7 by Kananatu, Santra and Yahya) and in Art and Design (see Chap. 13 by Manuell).

2.7 The Work Skill Development (WSD) Framework

In recent decades, the focus in higher education has shifted to producing job-ready graduates with a broad range of skills and attributes which transfer well to workplace settings. The WSD framework is a pedagogical tool that facilitates the conceptualisation and explicit development of students' work skills. The WSD framework offers a way for educators to bridge the gap between university curricula and industry requirements. In this way, the WSD contributes to WIL (Work Integrated Learning) pedagogy by conceptualising and facilitating the explicit development of students' work skills, and informing and guiding student assessment in WIL as well as regular curriculum (Bandaranaike & Willison, 2010).

The WSD framework provides a structure and learning trajectory that enables educators to scaffold the incremental development of work skills in either existing or new curriculum as well as WIL experiences. This suggests practical applications such as informing course design, framing learning tasks, activities and assessment design. Therefore, the WSD framework supports educators to plan and set learning goals, so that students can see how their work skills are progressing. As a self-reflective tool, the WSD helps students to identify their work skills, what skills might be required in a given role, how to monitor their skill development and a way to interpret how autonomously they might be expected to work in a given role in regard to certain skills.

The WSD framework consists of Work Skill Facets (see Table 2.1) that describe a range of higher order cognitive skills and processes required in a work context. Like the RSD, each Skill Facet is represented as a verb pair (i.e. Initiative and Goal-oriented). The verb pair is intended to capture the complementary nature of these skills. While these capabilities may be mutually exclusive, they are more likely

Table 2.1 Skill facets of the RSD (2018), WSD (2019) and DSD (2018) frameworks demonstrating the inter-relatedness of the MELT facets (cognitive skills, the affective domain and guiding questions pertaining to each facet)

Skill facets		
Research Skill (RSD) Development framework	Work Skill (WSD) Development framework	Digital Skill (DSD) Development framework
Embark and clarify *What is our purpose?* Curious	Initiative and goal-oriented *What is my role?* Motivated	Explore and clarify *What is my/our purpose?* Curious
Find and generate *What do we need?* Determined	Resourceful and informed *What do I need?* Discerning	Select and use *What will I/we use?* Experimental
Evaluate and reflect *What do we trust?* Discerning	Learning and reflecting *How do I improve?* Empowering	Evaluate and reflect *How will I/we know?* Discerning
Organise and manage *How do we arrange?* Harmonising	Planning and management *How do I organise?* Mindful	Organise and manage *How will I/we plan the approach?* Harmonising
Analyse and synthesise *What does it mean?* Creative	Critical reasoning and problem solving *How do I solve?* Creative	Synthesise and create *What can I/we make?* Creative
Communicate and apply *How do we relate?* Constructive	Communication and teamwork *How do I relate?* Ethical	Collaborate and communicate *How do I/we relate?* Connected

to be complementary and co-dependent. That is, they describe a cluster of skill categorisations best developed in tandem. Like the RSD framework, the Skill Facets of the WSD do not sit in isolation, they are multi-faceted in that they overlap and share elements of each other.

The value of the WSD for the library's teaching practice has been in describing how the skills students develop as part of their university education can also be articulated as skills valued by the workplace. The WSD was developed in response to a need to do the following: assess students' work readiness (Bandaranaike & Gurtner, 2017; Bandaranaike, 2018) in a range of domains including emotional and cultural intelligence; provide feedback to students in internships; and guide reflective conversations on work skill development with students (Bandaranaike, 2018). It has been useful in conceptualising a self-reflective approach where students align their work skills with autonomy descriptors (Torres et al., 2014). As such, uptake of the WSD framework has been led by MUL and applied to framing learning tasks, activities and assessment design in disciplines such as Accounting and Finance, Business and Economics and Law (Torres et al., 2014). In this volume, we share how the WSD has been used to map competency standards for Occupational Therapy to facilitate the library's response to student learning (see Chap. 18 by Todd, Khoshsabk, Torres and Peart) and to guide and monitor a Library Internship Program for Korean Studies students (see Chap. 17 by Dewi, Kim and Jackson) highlighting how skills gained through study can transfer to the workplace (Table 2.2).

Table 2.2 Student autonomy as described in the MELT (RSD, WSD and DSD frameworks), demonstrating how the autonomy descriptors for each of these frameworks relate to one another

	Models of Engaged Learning and Teaching (MELT)				
	Scope for student autonomy				
	Prescribed	Bounded	Scaffolded	Open-ended	Unbounded
Research Skill Development (RSD) framework	Highly structured directions and modelling from educator prompt researching in which …	Boundaries set by and limited directions from educator channel researching in which …	Scaffolds placed by educator shape independent researching which …	Student initiate research and this is guided by the educator	Students determine guidelines for researching that are in accord with discipline or context
Work Skill Development (WSD) framework	Highly structured directions and guidance from mentor where the student …	Boundaries set by and limited directions from mentor where, the student …	Demonstrates some independence within provided guidelines where the student …	Works independently to innovate with limited guidance where the student …	Works within self-determined guidelines appropriate to context, where the student …
Digital Skill Development (DSD) framework	Highly structured directions and modelling from the educator prompt the learner(s) to …	Boundaries set by the educator channel the learner(s) to …	Scaffolds placed by the educator enable the learner(s) to independently …	Learners instinctively initiate engagement with digital technology that may be guided by the educator to …	Learners normalise and digital practices in accordance with context to …

2.8 The Digital Skill Development (DSD) Framework

A world transformed by technology has brought new considerations for what it means for students to be digitally literate and what educators might be required to do to enable such skills in the curriculum (Goodfellow, 2011; McMahon, 2014). However, defining the dimensions inherent in digital literacy is a complex undertaking as digital literacy incorporates a sophisticated and broad range of skills. Perceiving digital literacy as pertaining solely to a set of technical skills over-simplifies their scope. A more expansive view of digital literacy incorporates a range of overlapping cognitive and interpersonal skills, attitudes, dispositions and practices in conjunction with technical skills (Feerrar, 2019). However, the complex nature of this skill set can challenge educators in explicitly describing and developing digital skills

within programmes of study (McMahon, 2014). This would suggest that describing digital skills and attributes calls for a taxonomy of terms to enable, evidence and guide learning practices (Stordy, 2015). However, Spante et al. (2018) in surveying the literature, note that defining the diversity of concepts related to digital literacy remains problematic. Within the context of higher education, establishing a common understanding of digital literacy remains evident, as policy and institutional documents would benefit from reflecting a more expansive view of this skill range, as well as greater consistency in defining what digital literacy encompasses (Feerrar, 2019; Spante et al., 2018).

A library-led initiative in partnership with discipline academics was established to create a suitable pedagogical tool to articulate and support the progressive development of digital skills for a variety of learning contexts. Libraries have a long history of being involved with IL and consider digital literacy as an expansion of this skill set. As such, digital skill frameworks have been created by academic libraries, to help demonstrate how IL skills connect to digital literacy (Feerrar, 2019). A number of digital skill frameworks created for educational contexts were examined and reviewed as part of the working group's initial project scoping. These frameworks were comprehensive and drew on a range of knowledge domains including cognitive and metacognitive, affective, psychomotor, social, personal and technical, however, although the frameworks covered an extensive range of digital skills, we concluded they carried certain shortcomings.

The overall focus was often information-centric, meaning, they sometimes focussed on finding, using and evaluating information in online settings. This risks a limited interpretation of the digital practices that are required to function effectively in contemporary digital settings, be they learning, social or workplace settings. In addition, most frameworks lacked an important developmental perspective to guide skill progression. Consequently, this limited the potential of these frameworks as pedagogical tools for explicitly guiding digital skill development within curricula.

In response to this identified gap, the DSD framework was developed to provide guidance to educators in enabling students' digital skills within a range of learning contexts. In order to address the complexity of what it means for students to be digitally literate, the DSD working group developed the following working definition of digital skills:

> The contemporary digital skills and attributes required to engage with technologies for learning, researching, working, and functioning in society in the digital age. This involves consuming, collaborating and creating with digital tools, and takes into account digital identity, digital wellbeing and e-Safety (Digital Skill Development framework 2018).

The DSD framework is informed by the same pedagogical underpinnings and parameters as the earlier MELT, and therefore, offers a flexible, adaptable and non-prescriptive conceptual model to guide educators in enabling students' digital skills. The term 'digital skills' rather than 'literacy' was chosen because it aligns with the parameters of the MELT, ensuring consistency with these models. The DSD framework is being applied to provide pedagogical guidance in recognising, identifying, enabling and expanding the repertoire of contemporary digital skills required by

students to meet the demands of learning, social life and employment in a digital age (McLeod & Torres, 2020; Torres et al., 2018). A chapter exploring the DSD in a workshop for students undertaking an Education Pathways unit (see Chap. 15 by Pilz, McLeod and Yazbeck) is presented in this book.

2.9 Summarising the Characteristics of the MELT

The MELT actively facilitates student learning in ways that enable students' skills to grow in sophistication and rigour (Willison, 2018). The characteristics of the MELT make the developmental side of learning visible through the three guiding parameters of the frameworks: the cognitive domain (Skill Facets), the Scope for Student Autonomy and the affective domain. When engaging with the MELT, it is often useful to remember the frameworks have the following characteristics:

- Conceptual models
- Pedagogical tools
- Learning continuums
- Tools to inform assessment and curriculum design
- Flexible, adaptable, dependent on context
- Applicable to a range of curricula and learning contexts
- Offering a common language for research skill development amongst educators
- In synergy with educational strategies

  On the other hand, the MELT have shown *not* to be.

- Assessment rubrics
- Prescriptive and inflexible
- A set of rules
- Lockstep

A benefit of the MELT is that each framework shares the same guiding parameters and theoretical principles. Therefore, familiarity with one of the MELT enables understanding of another of the MELT frameworks. This has been invaluable for establishing shared knowledge of the MELT across library teaching teams and for building library staff confidence in selecting and applying the most appropriate MELT framework for a given context.

The significance of the MELT for library educational strategies and goals has been in the way these pedagogical tools have opened and guided a new discourse for students' skill development, enabling the library to transform, extend and deepen its educational practice in a highly sophisticated way. The MELT has offered a way to overcome the dilemma faced by library staff, in how to identify, articulate and chart the movement of students' research skill development, as well as how to facilitate that movement. By providing a common language through which educators from across the university can underpin collaborative approaches to teaching, learning, curriculum and assessment design. Of significance, the MELT has catalysed a deeper

understanding of the professional, pedagogic and discipline-based perspectives of our practice, and what we share in common with educators across the university.

References

American Library Association (ALA). (2000). ACRL standards: Information literacy competency standards for higher education. *College & Research Libraries News, 61*(3), 207–215. https://doi.org/10.5860/crln.61.3.207

Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). In A. Bundy (Ed.), *Australian and New Zealand information literacy framework: Principles, standards and practice* (2nd ed.). Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf.

Association of College and Research Libraries. (2015). *Framework for information literacy for higher education.* Retrieved from http://www.ala.org/acrl/Standards/ilframework.

Bandaranaike, S. (2018). From research skill development to work skill development. *Journal of University Teaching & Learning Practice, 15*(4), 1–18.

Bandaranaike S., & Gurtner, Y. (2017, June 5–8). *Integrating cross cultural sensitivity in the workplace: Developing globally proficient professionals.* Paper presented at 20th World Conference on Cooperative and Work Integrated Learning (WACE), Chiang Mai, Thailand. Retrieved from https://www.researchgate.net/publication/304571323_Integrating_Cross_Cultural_Sensitivity_in_the_Workplace_Developing_Globally_Proficient_Professionals.

Bandaranaike, S., & Willison, J. (2009/2018). Revised by Monash University Library, 2019. *Work skill development framework.* Retrieved from https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf.

Bandaranaike, S., & Willison, J. (2010, September 27–October 1). *Work skill development framework: An innovative assessment for work integrated learning.* Paper presented at ACEN 2010: Australian Collaborative Education Network National Conference, Perth, WA, Australia.

Bandaranaike, S., & Willison, J. (2017, June 5–8). *Building learner autonomy into work-integrated learning: Challenges for the 21st century.* Paper presented at 20th World Conference on Cooperative and Work Integrated Learning (WACE), Chiang Mai, Thailand. Retrieved from https://digital.library.adelaide.edu.au/dspace/bitstream/2440/97926/3/hdl_97926.pdf.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* W. H. Freeman and Company.

Barnett, R. (2000). *Realizing the university: In an age of supercomplexity.* Society for Research in Higher Education and the Open University Press.

Barnett, S. M., & Ceci, S. J. (2002). When and where do we apply what we learn? A taxonomy for far transfer. *Psychological Bulletin, 12*(4), 612–637. https://doi.org/10.1037/0033-2909.128.4.612

Barrie, S. C. (2004). A research-based approach to generic graduate attributes policy. *Higher Education Research & Development, 23*(3), 261–275. https://doi.org/10.1080/0729436042000235391

Biggs, J. B., & Collis, K. F. (1982). *Evaluating the quality of learning: The SOLO taxonomy.* Academic Press.

Bloom, B., Engelhardt, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives.* David McKay.

Boud, D. (1988). *Developing student autonomy in learning* (2nd ed.). Kogan Page.

Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education: A blueprint for America's research universities.* Stoney Brook. Retrieved September 29, 2005, from https://files.eric.ed.gov/fulltext/ED424840.pdf.

Brew, A. (2006). Learning to develop the relationship between research and teaching at an institutional level. *New Directions for Teaching & Learning, 2006*(107), 11–22. https://doi.org/10.1002/tl.241

Brew, A. (2012). Teaching and research: New relationships and their implications for inquiry-based teaching and learning in higher education. *Higher Education Research & Development, 31*(1), 101–114. https://doi.org/10.1080/07294360.2012.642844

Bruce, C. (1994). Portrait of an information-literate person. *HERDSA News, 16*(3), 9–11.

Bryant, R., Dortmund, A., & Lavoie, B. (2020). *Social interoperability in research support: Cross-campus partnerships and the university research enterprise*. OCLC Research. https://doi.org/10.25333/wyrd-n586.

Bundy, A. (2004). *Australian and New Zealand information literacy framework: Principles, standards and practice*. Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf.

Butler, S. (1999). Catalysing student autonomy through action research in a problem centred learning environment. *Research in Science Education, 29*(1), 127–140. https://doi.org/10.1007/BF02461184

Council of Australian University Librarians. (2001). *Information literacy standards*. CAUL.

Corrall, S., & Jolly, L. (2019). Innovations in learning and teaching in academic libraries: Alignment, collaboration, and the social turn. *New Review of Academic Librarianship, 25*(2–4), 113–128. https://doi.org/10.1080/13614533.2019.1697099

Dewey, B. I. (2005). The embedded librarian: Strategic campus collaborations. *Resource Sharing & Information Networks, 17*(1–2), 5–17. https://doi.org/10.1300/J121v17n01_02

Doskatsch, I. (2002). Australian and New Zealand Institute for Information Literacy (ANZIIL): New body to champion information literacy. *Australian Academic & Research Libraries, 33*(2), 113–116. https://doi.org/10.1080/00048623.2002.10755187

Doskatsch, I. (2003). Perceptions and perplexities of the faculty-librarian partnership: An Australian perspective. *Reference Services Review, 31*(2), 111–121. https://doi.org/10.1108/00907320310476585

Fazey, D. M. A., & Fazey, J. A. (2001). The potential for autonomy in learning: Perceptions of competence, motivation and locus of control in first-year undergraduate students. *Studies in Higher Education, 26*(3), 345–361. https://doi.org/10.1080/03075070120076309

Feerrar, J. (2019). Development of a framework for digital literacy. *Reference Services Review, 47*(2), 91–105. https://doi.org/10.1108/RSR-01-2019-0002

Head, A., Van Hoeck, M., Eschler, J., & Fullerton, S. (2013). What information competencies matter in today's workplace? *Library and Information Research, 37*(114), 74–104.

Healey, M., & Jenkins, A. (2009). *Developing undergraduate research and inquiry*. The Higher Education Academy. Retrieved from https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/hea/private/developingundergraduate_final_1568036694.pdf.

Hill, J., Walkington, H., & France, D. (2016). Graduate attributes: Implications for higher education practice and policy: Introduction. *Journal of Geography in Higher Education, 40*(2), 155–163. https://doi.org/10.1080/03098265.2016.1154932

Hughes, P., Tucker, K., & Knaggs, C. (2011). Sitting on the same bench: Complementing law learning outcomes. *Journal of Academic Language & Learning, 5*(2), A50–A59. Retrieved from https://journal.aall.org.au/index.php/jall/article/view/150/109.

Goodfellow, R. (2011). Literacy, literacies and the digital in higher education. *Teaching in Higher Education, 16*(1), 131–144. https://doi.org/10.1080/13562517.2011.544125

Kananatu, T. (2017, December 11–13). *Using the research skill development framework to construct marking rubrics for law assessments*. Paper presented at I-MELT (Models of Engaged Learning and Teaching) Conference, Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/309/kananatuimelt2017paper.pdf.

Karu, P., Tran Minh, H., & Sta Maria, B. (2017, December 11–13) *Using the optimising problem-solving pentagon as a basis for research skills in final year engineering*. Paper presented at International Conference on Models of Engaged Learning and Teaching (I-MELT), Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/408/purushimelt2017paper-1.pdf.

Koch, M. (2001). Information literacy: Where do we go from here? *Technos: Quarterly For Education and Technology, 10*(1), 20–26. Retrieved from http://www.technos.net/tg_10/1koch.htm.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives [handbook 2: Affective domain]*. Longman.

Kuhlthau, C.C. (2004). *Seeking meaning: A process approach to library and information services.* Libraries Unlimited.

McLeod, A., & Torres, L. (2020, April 6–9) *Enhancing first year university students' digital skills with the Digital Skill Development (DSD) framework*. Paper presented at SITE Online Conference (Society for Information Technology and Teacher Education), New Orleans, LA.

McMahon, M. (2014). Ensuring the development of digital literacy in higher education curricula. In B. Hegarty, J. McDonald, & S.-K. Loke (Eds.), *Rhetoric and reality: Critical perspectives on educational technology. Proceedings ascilite Dunedin 2014* (pp. 524–528). Retrieved from http://ascilite.org/conferences/dunedin2014/files/concisepapers/157-McMahon.pdf.

Moselen, C., & Wang, L. (2014). Integrating information literacy into academic curricula: A professional development programme for librarians at the University of Auckland. *The Journal of Academic Librarianship, 40*(2), 116–123. https://doi.org/10.1016/j.acalib.2014.02.002

Oliver, B. (2013). Graduate attributes as a focus for institution-wide curriculum renewal: Innovations and challenges. *Higher Education Research & Development, 32*(3), 450–463.

Olivares, O. (2010). The sufficiently embedded librarian: Defining and establishing productive librarian-faculty partnerships in Academic Libraries. *Public Services Quarterly, 6*(2–3), 140–149. https://doi.org/10.1080/15228959.2010.497468

Osborn, J. (2017). Librarians as teachers: Forming a learning and teaching community of practice. *Journal of the Australian Library and Information Association, 66*(2), 162–169. https://doi.org/10.1080/24750158.2017.1328633

Peacock, J. (2001). Teaching skills for teaching librarians: Postcards from the edge of the educational paradigm. *Australian Academic & Research Libraries, 32*(1), 26–42. https://doi.org/10.1080/00048623.2001.10755141

Peirce, E., Ricci, M., Lee, I., & Willison, J. (2009, 30 September–2 October). *First-year Human Biology students in the ivory tower*. Paper Presented at *National UniServe Science Annual Conference*, University of Sydney, Sydney, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/753/pdf-ivory.pdf.

Pretorius, L., Bailey, C., & Miles, M. (2013). Constructive alignment and the research skills development framework: Using theory to practically align graduate attributes, learning experiences, and assessment tasks in undergraduate midwifery. *International Journal of Teaching and Learning in Higher Education, 25*(3), 378–387.

Smith, L. (2011). Monash University Library and learning: A new paradigm for a new age. *Australian Academic & Research Libraries, 42*(3), 246–264. https://doi.org/10.1080/00048623.2011.10722235

Spante, M., Hashemi, S.S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education, 5*(1). https://doi.org/10.1080/2331186X.2018.1519143

Stordy, P. (2015). Taxonomy of literacies. *Journal of Documentation, 71*(3), 456–476. https://doi.org/10.1108/JD-10-2013-0128

Taib, A., & Holden, J. (2013). 'Third generation' conversations—A partnership approach to embedding research and learning skills development in the first year. A practice report. *The International Journal of the First Year in Higher Education, 4*(2), 131–136. https://doi.org/10.5204/intjfyhe.v4i2.178.

Torres, L. (2018). Research skills in the first year biology practical—Are they there? *Journal of University Teaching and Learning Practice, 15*(4). Retrieved from https://ro.uow.edu.au/jutlp/vol15/iss4/3.

Torres, L., Bandaranaike, S., & Yates, S. (2014, June 2–4). *'What skills do I have? What skills will I need?'—Building an employability skills profile through an online reflective learning program.* Paper presented at 10th International Symposium on Cooperative and Work-Integrated Education, University West, Trollhattan, Sweden. Retrieved from https://researchonline.jcu.edu.au/38450/.

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council for Undergraduate Research (CUR) Quarterly, 37*(1), 26–33. https://doi.org/10.18833/curq/37/1/9.

Torres, L., McLeod, A., Yazbeck, B., Rayner, G., Skrbis, M., Yates, S., Dickson, N., & Fulton, H. (2018). *Digital skill development framework*. Retrieved from https://www.monash.edu/__data/assets/pdf_file/0010/1652437/DSD-22.05.20.pdf.

Vygotsky, L. S. (1978). *Mind in society*. Harvard University Press.

Wielenga-Meijer, E. G., Taris, T. W., Wigboldus, D. H., & Kompier, M. A. (2011). Costs and benefits of autonomy when learning a task: An experimental approach. *The Journal of Social Psychology, 151*(3), 292–313.

Willison, J. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research & Development, 31*(6), 905–919. https://doi.org/10.1080/07294360.2012.658760

Willison, J. (2017). *The Models of Engaged Learning and Teaching (MELT)*. Retrieved from https://www.adelaide.edu.au/melt/.

Willison, J, (2018) Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching and Learning Practice, 15*(4). Retrieved from https://ro.uow.edu.au/jutlp/vol15/iss4/1.

Willison, J. (2020). *The models of engaged learning and teaching: Connecting sophisticated thinking from early childhood to PhD*. Springer. https://doi.org/10.1007/978-981-15-2683-1.

Willison, J., & Buisman-Pijlman, F. (2016). PhD prepared: Research skill development across the undergraduate years. *International Journal for Researcher Development, 7*(1), 63–83. https://doi.org/10.1108/IJRD-07-2015-0018

Willison, J., Lievre, K., & Lee, I. (2010). *Making research skill development explicit in coursework*. Prepared for the Australian Learning & Teaching Council. Retrieved from https://www.adelaide.edu.au/melt/evidence#empirical-studies-of-research-skill-development.

Willison, J., & O'Regan, K. (2006/2018). *Research skill development framework*. Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf.

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: A framework for students becoming researchers. *Higher Education Research & Development, 26*(4), 393–409. https://doi.org/10.1080/07294360701658609

Willison, J., Sabir, F., & Thomas, J. (2017). Shifting dimensions of autonomy in students' research and employment. *Higher Education Research and Development, 36*(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216

Willison, J., Schapper, J., & Teo, E. (2009, February 6). *Multiple methods of improvement of research skills in business ethics and business law*. Paper presented at QATLHEBEC Conference, University of Melbourne, Melbourne, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/756/willison_schapper_teo.pdf.

Wong, T., & Yahya, E. (2017, December 11–13). *Towards a more cogent curriculum for experimental writing: A case study*. Paper Presented at I-MELT (Models of Engaged Learning and Teaching) Conference, Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/300/wongimelt2017paper.pdf.

Zoghi, M., & Dehghan, N.H. (2012). Reflections on the what of learner autonomy. *International Journal of English Linguistics, 2*(3), 22–26. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.866.4252&rep=rep1&type=pdf.

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Chapter 3
The Pedagogical Model Adopted by La Trobe University Library—Constructive Alignment and Information Literacy

Fiona Salisbury and Caroline Ondracek

Abstract Academic librarians are routinely involved in information and digital literacy skill development programmes to build students' research capability. 'Embedded' approaches to information literacy (IL) are often highlighted as having the most potential in terms of delivering authentic IL learning experiences as part of disciplinary content. The purpose of this chapter is to present and examine the model used at La Trobe University Library (LTUL) to connect information and digital literacy skills development to the curriculum. This model relies on collaboration and one particular pedagogical approach—the theory of constructive alignment—to embed IL skills in the curriculum. In presenting the LTUL Model, this chapter promotes the benefits of linking educational theory and library practice. Our experience strongly suggests that a theorised approach for embedding IL in the curriculum makes sense, for not only improved programme design, achievement of learning outcomes and student success, but also for realising the potential of collaborative partnerships involving librarians, academics, and teaching and learning staff.

3.1 Introduction

A major challenge for academic librarians is how to ensure all students are given opportunities to develop the information and digital literacy skills needed   at university, professionally, and for lifelong learning. These skills are typically included in university graduate capability statements, which affirms their importance as part of the suite of capabilities that all graduates ought to have, regardless of course of study. The challenge and scale implicit in reaching *all* students cannot be underestimated; moreover, 'all students' can be difficult to conceptualise. Imagine sitting in a

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La Trobe University is a public research university in Victoria, Australia. La Trobe opened in 1967 with 552 students and currently has over 30,000 students at campuses in Melbourne (Bundoora), Melbourne city, Mildura, Shepparton, Albury-Wodonga and Bendigo.

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full-to-capacity sporting arena that holds over 30,000 spectators. Casting your eyes across a crowd of this size is to glimpse the La Trobe University (La Trobe) student population in its entirety; taking in a single view of thousands of individuals lays bare the enormity of the aspiration to give *all students* the opportunity to develop information and digital literacy skills. Understanding the size of the population to be engaged is the first step in considering where information literacy (IL) skills are best learned, practised, reinforced and mastered. At La Trobe University Library (LTUL) considering issues of scale has involved weighing up the pros and cons of embedding IL in the curriculum with more disarticulated approaches to develop students' skills (Salisbury et al., 2012). For us, resolving issues of scale, and creating opportunities for all students to become confident information literate graduates, starts when librarians work in partnership with academics to embed IL in the curriculum.

Advocates of embedding IL in the curriculum in the higher education environment understand it doesn't just happen overnight. If librarians find themselves in an institutional environment where information skills development is at best 'bolted on' to the curriculum in an ad hoc way, and at worst omitted because of a lack of space in the curriculum, best intentions can easily be stymied. Prior to 2009, for example, even though we had long been liaising with academic staff to build students' IL skills, we still found it difficult to achieve a coordinated and scaffolded approach for all students. As a result, some students repeated the same IL learning activities across multiple subjects, while others either didn't receive an opportunity at all, or were introduced to IL too late in their course to be able to progressively build skills. To improve student access to IL skill development opportunities in the La Trobe environment, we needed a different basis for collaborating with academic staff; in other words, a more theoretical perspective that would resonate with academics, engage students, and result in a coordinated and coherent approach across the institution.

Since 2009, librarians at La Trobe have worked with a model that combines collaboration, embedding IL skills and educational theory, to change the way the library provides opportunities for students to develop information and digital literacy skills within the curriculum. For librarians and academics working together in this endeavour, the interplay between collaboration, information literacy and curriculum design is complex; effective collaboration needs a shared theoretical view to guide pedagogical practice and to ensure better learning outcomes for students. The focus of this chapter is firstly to present the tripartite LTUL Model and to position the rationale for the model within the library and higher education literature. Secondly, the chapter examines the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019), which outlines the model in detail. The LTUL practice-based examples in this book show the model in action. They illustrate the principles of the model—collaboration and curriculum embedding driven by theory—and demonstrate how the LLTP Framework has been used to guide and inform practice. Each practice-based example is an instance of how the LLTP Framework has been interpreted and applied in a particular situation. Embedding IL in individual subjects and across courses in a learning-centred way requires a collaborative approach where IL skill development is connected with discipline content by interleaving IL elements through the curriculum design. The practice-based examples

demonstrate how librarians and academics have taken a learning-centred approach to tackling problems of scale to ensure all students have an opportunity to build information and digital literacies throughout their learning journey.

3.2 The La Trobe University Library Model

The pedagogical model adopted by LTUL to connect the library to the curriculum responds to the universal challenge of how to provide all students with opportunities to build IL skills over the course of their degree. The LTUL Model (Fig. 3.1) links three elements—collaboration (between librarians, academics and teaching and learning staff), embedded information literacy (as part of curriculum design processes) and educational theory (constructive alignment). The model recognises constructive alignment as an empowering pedagogical tool that unlocks sustainable and effective learning-centred approaches to embedding information and digital literacies in the curriculum. Furthermore, it promotes productive curriculum conversations and collaborative practice between academic and professional staff.

The LTUL Model was originally developed as a result of the library's Design for Learning programme, which was part of a university-wide programme of curriculum reform in 2009 (Salisbury, 2009). This university-wide programme was an example of what Ruge et al. (2019) identify as a 'top-down' constructive alignment implementation. Our involvement in this programme fundamentally changed our IL practice in that it became:

- strategically linked to the university learning and teaching agenda
- explicitly linked to graduate capabilities
- focused on partnership over support
- theoretically driven by pedagogy

Fig. 3.1 LTUL Model by La Trobe University Library, used with permission
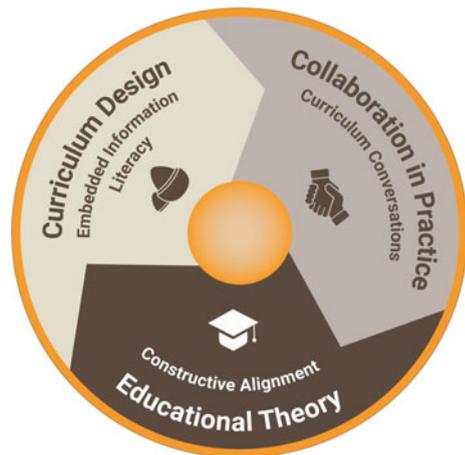
- learning centred
- evidence-based
- situated in the 'third space'.

The true test of how a library connects to the curriculum can be measured by the level of institutional buy-in and alignment with institutional strategy. Without strategic traction, issues of scale and institutional impact will always remain unresolved. The library's involvement in the 2009 curriculum reform programme came with institutional sponsorship to rethink and change how we practice. As a result, we established new IL routines, we trialled an institution-wide approach to IL skill development for all students, and we gathered evidence of the impact of embedded IL from the perspective of students and academics. By pushing and pulling our IL practice in multiple directions to test how it might be implemented at scale as part of a broad institutional curriculum reform programme, we developed more effective ways of working and abandoned unsustainable and ad hoc 'one-shot' library teaching interventions. In operationalising the model our orientation has shifted toward university learning and teaching objectives and away from library-centric IL goals (Salisbury & Sheridan, 2011). Between 2009 and 2014, 22,000 students across five faculties were directly exposed to the model. Throughout this time, we collected evidence regarding the impact of the model on student learning outcomes. For example, from 2009 to 2012 we followed a group of health science students as they developed their IL skills from first to final year. This longitudinal study demonstrated the effectiveness of embedding IL into the curriculum design for developing IL skills progressively throughout a course. It also highlighted the advantages of collaborative practice in terms of student achievement of learning outcomes and graduate capabilities, thus reinforcing the impact of library and faculty partnerships in the university teaching and learning environment (Salisbury et al., 2013).

While the LTUL Model certainly reflects the outcomes of our involvement in a 'top-down' curriculum reform programme at a point in time, importantly it has endured. We have carried its principles into subsequent curriculum renewal programmes and 'bottom-up' collaborations to embed IL in subjects outside formal curriculum review processes. Collectively reflecting on our experience resulted in the development of the LLTP Framework in 2014. The LLTP Framework guides ongoing implementation of the model so that it is coordinated, consistent, sustainable and scalable. That our model has transcended several rounds of curriculum change is testament to its acceptance, strength, transferability and ongoing relevance.

3.2.1   LTUL Model Rationale—Educational Theory

3.2.1.1   Why is Constructive Alignment Powerful?

Constructive alignment is 'based on the twin principles of constructivism in learning and alignment in the design of teaching and assessment' (Biggs 2007, p. 52). It

requires teachers to align intended learning outcomes, learning activities and assessment tasks. If the link between these three aspects of the curriculum is made explicit, then a deeper approach to learning is more likely. Students can't 'escape' learning because there is a logical and obvious consistency in the way all components of the curriculum (intended learning outcomes, teaching and learning activities and assessment tasks) support each other (Biggs & Tang, 2007). Firstly, in constructive alignment the intended learning outcomes (ILOs) specify the topic and the activity; that is, not just 'what is to be learned' but 'how it is to be learned' (Biggs & Tang, 2007, p. 52). Secondly, the teaching and learning activities engage the student in appropriate practice and rehearsal of knowledge, and thirdly, assessment tasks focus on how well the student has achieved the ILOs. The emphasis is more on 'what and how students are to learn rather than on what topics the teacher teaches' (Biggs & Tang, 2007, p. 52). When teachers pay attention to what the student needs to do 'to construct meaning through relevant learning activities' (Biggs, 2003), teaching shifts toward engaging students in active learning and away from just transmission of knowledge (Biggs & Tang, 2007); in other words, the teacher becomes the catalyst for and facilitator of learning (see Chap. 11 by O'Hanlon and Karasmanis).

Constructive alignment provides a logical frame for embedding information skills development into the curriculum in an authentic and meaningful way; it promotes deep learning so the student can put IL content to work alongside discipline content. In a constructively aligned curriculum, IL elements—ILOs, learning activities and assessment tasks—are joined with the discipline-specific ILOs, learning activities and assessment tasks. Using constructive alignment to embed IL into the curriculum requires an understanding 'that activities and assessments must be keyed to the learning outcomes' (Coonan & Secker, 2011, p. 6). This approach makes clear what IL skills the student needs to learn, what they will do to develop skills and how their skill development will be measured (Yager et al., 2013). While on the one hand this approach is 'common sense' (Biggs & Tang, 2007, p. 61) on the other hand it is important for librarians to make sure that an analysis of components to be aligned is not undertaken in a mechanical or superficial manner at the expense of leveraging the constructivist pedagogy that is central to constructive alignment (Biggs, 1996; Biggs & Tang, 2007).

3.2.1.2 Constructive Alignment and Information Literacy

For more than twenty years Christine Bruce's writing has infused the discussion around IL with a theoretical dimension related to how information use is experienced. In 2001, Bruce proposed a set of five partnership categories that academic librarians need to work with to be effective in teaching and learning. She argues that her partnership categories have the potential for new collaborations related to IL, and therefore present librarians with opportunities to be involved in creating learning experiences that highlight the value of IL. In the discussion of the 'Curriculum partnerships' category she emphasises the role of constructive alignment in partnerships between librarians and academics by stating that:

> Ultimately the aim for Australian librarians and faculty must be to help students learn
> content through the processes of information use. This will mean applying Biggs' prin-
> ciple of constructive alignment; and placing more emphasis on information literacy as a way
> of working with information that can be encouraged or discouraged by particular learning
> activities. (p. 113)

Like Bruce, Lupton (2004) also highlights constructive alignment as part of the collaborative process of embedding IL into curriculum design. Embedding IL is clearly seen not only as good practice, but as a shared responsibility (Lupton, 2004, p. 27). Lupton also promotes using constructive alignment as a basis for educators to collaborate on connecting IL to the curriculum in a way that is meaningful to students:

> The need for educators to collaborate is apparent in the concept of curriculum alignment.
> In this concept there is a correlation between goals, objectives, content, learning outcomes,
> teaching methods, teaching and learning activities, assessment and evaluation. (p. 25)

Introducing constructive alignment to conversations about embedding IL is likely to prompt shared responsibility, and more coherent approaches and measures of success that focus on the quality of student learning and what the student needs to do to develop IL skills. Lupton argues such consistency needs to occur not just within a single subject but holistically across a degree programme (2004, p. 25). Bruce and Lupton both recommend using constructive alignment to underpin collaborative approaches to teaching and learning related to IL. If teaching and learning is a highly theorised practice, then it follows that embedding IL into the curriculum design requires a theoretical approach.

Academics that have used constructive alignment for embedding generic academic skills and IL into the curriculum attest to its value (Argüelles, 2016; Barr et al., 2020; Edwards & Bruce, 2004; Salisbury et al., 2013; Treleaven & Voola, 2008; Ward & Hockey, 2007; Webster & Kenney, 2011; Yager et al., 2013). Ward and Hockey (2007) overtly coupled constructive alignment and IL. They describe the process for embedding IL into the curriculum design as a connection between the IL standards, subject ILOs, learning activities, assessment tasks and actual student achievement. They emphasise the value of collaboration between librarians, academics and other teaching and learning staff as key to the success of embedding IL into the educational process (see Chap. 10 by Spain and Mackay). For Ward and Hockey (2007) successful collaboration results in an 'incremental development of information literacy skills from basic to advanced across the three year degree' (p. 379) (see Chap. 9 by Karasmanis and Murphy; Chap. 4 by Spain) and importantly, students develop skills that have 'prepared them for lifelong learning which can be transferred to the workplace' (p. 379).

Theoretical underpinnings and collaboration are both important in embedding IL; however, the theoretical conversations encouraged by Lupton (2004) are not always explicit in librarians' accounts of collaborative practice to embed IL. For example, librarians' description of embedding IL often focus on learning activities or assessment tasks without making connections to educational theory. In embedding IL in a biotechnology degree, Belanger et al. (2012) describe a collaboration to

embed a variety of IL assessment methods (for example, pre/post tests, surveys, worksheets and analysis of student bibliographies). The advantage of embedding assessment tasks was generating data related to student IL capability and opening ongoing dialogue with faculty. Belanger et al. also reflected that focusing on IL assessment in isolation revealed 'gaps between faculty and librarian learning goals' (p. 75). This reinforces the importance for colleagues to discuss and establish a shared vision for embedding IL: what are the intended outcomes, the related learning activities and assessment tasks, and the educational principles that connect these aspects? When theoretical conversations are lacking it prompts interesting questions regarding the implications for approaches that seek to embed IL into the curriculum without a theoretical basis. While there may be some well-supported reasons for not taking a theory-based approach, our experience at LTUL is that linking pedagogical theory and practice is not only an essential factor in facilitating close collaborations between university learning and teaching staff and library staff, it also results in improved student learning outcomes.

3.2.2 LTUL Model Rationale—Embedded Information Literacy

Over the past two decades there has been a clear preference in the international library literature for the embedded approach to developing IL skills (Grafstein, 2002; Lindstrom & Shonrock, 2006; Atwong et al. 2008; Samson, 2010; Derakhshan & Singh, 2011; Carrie & Mitchell, 2010; Winterman et al., 2011; Tagge, 2018) and the terms 'embedding', 'integrating', 'articulating' and 'infusing' are often used interchangeably. Regardless of terminology this approach is actively promoted by librarians who have a keen interest in connecting IL to the curriculum (Jenkins, 2005; Johnson et al., 2007). The momentum around embedding IL was fuelled in the early twenty-first century by national IL standards, which not only defined and described IL, but also recommended the embedded approach in the higher education environment. Standards from both Australasia and the U.S. at this time (ANZIIL 2004; American Library Association, 2000, ACRL 2003, 2015) called out the embedded approach (or 'integrated' in the U.S. environment) as the principal way to implement standards and provide a pathway from IL to independent learning (ANZIIL 2004, p. 7). This approach is based on the premise that development of IL skills and knowledge cannot be achieved without students being simultaneously engaged in discipline-based subject matter (Maybee et al., 2013). Embedding IL continues to be a highly recommended approach to achieve IL learning outcomes and address issues of scale.

The embedded approach to IL means positioning IL development as part of curriculum design from the outset, rather than making it a parallel or ad hoc afterthought (Gosling & Nix, 2011; Lavoie et al., 2011). As Coonan and Secker (2011) propose 'information literacy needs to be embedded into the academic curriculum as far as possible; it also needs to be ongoing throughout a student's

academic career and adapted according to the specific requirements of the discipline' (p. 6). Similarly, Bytoft Nyaas and Süld (2010) stress the 'importance of a contextualised approach' (see Chap. 11 by O'Hanlon and Karasmanis; Chap. 4 by Spain). Embedding IL so that it is situated and 'contextualised' within a discipline is a view that is seen by many as the most effective option (Dolan & Martorella, 2003; DaCosta, 2010; Chen and Lin 2010; Farrell & Badke, 2015). If students are to learn about finding, using and evaluating scholarly information in an authentic way, IL needs to be 'an integral part of the curriculum, not isolated from it' (Ward & Hockey, 2007, p. 375); the embedded approach, however, is also the most challenging to implement.

While the goal for many librarians may be to embed IL into the curriculum, there is also a recognition that it is impossible for librarians to achieve this on their own (Curzon, 2004; DaCosta, 2010; Jacobson & Mackey, 2007; McGuinness, 2006). Librarians recognise their 'lack of curricular authority' (Flaspohler, 2012, p. 74) as an impediment to IL easily co-existing with course content on a large scale. For some this barrier means other methods like the standalone or independent IL course should be explored (Badke, 2005; Blackall, 2002; Johnston & Webber, 2003), while for others, IL skills are seen as a joint responsibility (Hunt & Birks, 2004; Rockman, 2004), and collaboration between academics and librarians as essential 'to capitalise more effectively on our shared education mission' (Flaspohler, 2012, p. 74).

3.2.3   LTUL Model Rationale—Collaboration

Collaborative relationships between academics and librarians are very important to librarians (Derakhshan & Singh, 2011; Stubbings & Franklin, 2006). It is clear to librarians that a collaborative approach brings together complementary expertise (Brown & Krumholz, 2002; Lipu, 2003; Llewellyn, 2019; Miller et al., 2010; Sjoberg & Ahlfeldt, 2010). Librarians are prolific writers about their collaborative relationships. For example, Phelps and Campbell (2012) examined how the academic/librarian relationship has been described over time and what contributes to, or discourages, partnership. Their scrutiny of elements that hinder and/or contribute to collaboration leads to the conclusion that in developing partnerships, librarians need to refocus the relationship so that it is not so focused on producing a product. They suggest that a focus on shared values results in stronger and more lasting connections.

In their exploration of collaboration between academics and librarians, Pham and Tanner (2014) identified commitment to working together, shared norms, and having a common conceptual framework as some of the features of effective collaboration. Collaborative partnerships that work well are those based on trust, commitment and shared values. Conversations around shared learning and teaching values therefore will strengthen collaborations related to embedding IL in the curriculum (see Chap. 4 by Spain; Chap. 6 by Findlay and O'Dwyer; Chap. 10 by Spain and Mackay; Chap. 11 by O'Hanlon and Karasmanis). Educational theories, like constructive alignment,

can also prompt deeper reflection on practice when explicit in librarians' conversations (Feekery et al., 2016; Salisbury et al., 2012, 2013). Librarians need to initiate conversations that are 'more educationally focused and link institutional objectives, educational theory and student learning outcomes' (Salisbury et al., 2012, p. 10) so they can assuredly discuss with academics how embedding IL into the curriculum leads to improving student learning outcomes (Saunders, 2012). Collaboration is the key and 'the shift in emphasis to learning outcomes is realised through collaborative practice' (Mackey & Jacobson, 2010, p. 215).

When librarians report on relationships where collaboration to embed IL has been based on educational theory and an understanding of discipline pedagogy, they also conclude that the result is 'deeper and more productive conversations and collaborations' (Fosmire, 2012, p. 51) between librarians and academics (see Chap. 16 by Ripoli et al.; Chap. 10 by Spain and McKay; Chap. 11 by O'Hanlon and Karasmanis). Collaboration based on a pedagogical approach brings about new coherent practices (Winterman et al., 2011) because librarians and academics 'understand and view the student group from the same perspective' (Bostock et al., 2010, p. 115). Theory-based practice is also often a key ingredient for collaboration that is sustained over time and that tracks progression of student skill development through the curriculum (Fleming-Castaldy, 2018; Lach & Pollard, 2019) (see Chap. 4 by Spain; Chap. 9 by Karasmanis and Murphy).

As previously discussed, the rationale for our model has a strong foundation in the library and higher education literature. Despite having a robust justification based in the literature, the sustainable implementation of any model requires a guidebook, and for LTUL that guidebook is the LLTP Framework. The LLTP Framework enables the model to be implemented as business as usual. With the LLTP Framework as a dynamic manual for practice we have operationalised the model across the library and institution.

3.3 The LLTP Framework

The LLTP Framework operates within the context of university strategic drivers and has evolved alongside university policy related to information and digital literacy (La Trobe University, 2020). The constant in successive university strategies and plans is ensuring all students can progressively develop the required information and digital literacies for academic success; the LLTP Framework assembles the components (Fig. 3.2) needed to guide library staff to deliver this objective.

Organised around the student learning journey, the LLTP Framework is focused on collaboration between people in the university learning and teaching community. The 'partnership' of the LLTP Framework's title gives prominence to partnership between library staff, students and our academic and professional colleagues. This intentional emphasis acknowledges that librarians are 'third space' professionals (Whitchurch 2013), and creating opportunities for all students to develop IL skills cannot be undertaken by librarians alone; it must occur in the third space where

Fig. 3.2 LLTP Framework components by La Trobe University Library, used with permission
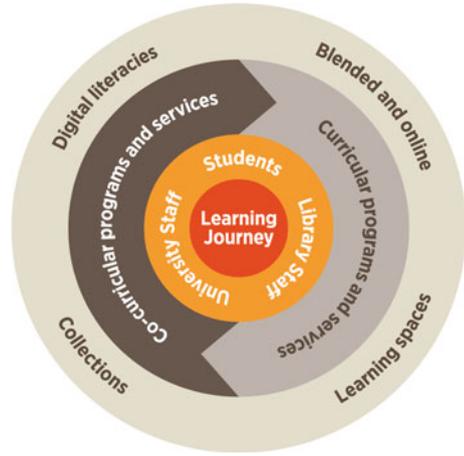
boundaries between academic and professional domains are fluid and responsibilities are shared.

While the focus of this chapter is on connecting the library to the curriculum, the LLTP Framework is broader. It takes a holistic view of the student learning journey and recognises that information and digital literacies need to be both embedded in and supported outside the curriculum, through a range of library programmes, services, collections and spaces. The LLTP Framework also situates IL in the broader digital literacies landscape by referencing the high-level attitudes and capabilities outlined in the La Trobe Digital Literacies Framework (La Trobe University, 2016). This reflects our intention to make visible the relationship between information and digital literacies in the 'broader conception and practical contexts of academic and/or professional competencies' (Corral and Jolly 2019, p. 122) that underpin institutional priorities for graduate capabilities and employability skills.

Foregrounding digital literacies as a component of the LLTP Framework also emphasises the importance of this capability set for librarians. Librarians are increasingly inhabiting online learning environments more than face-to-face classrooms. Additionally, they routinely develop online resources and learning objects to address issues of scale and student engagement. In our internal staff development programme, the principles of constructivism that are so important for student learning also come to the fore to enable librarians to actively expand their digital skills and share their experiences with each other.

The blended and online delivery component of the LLTP Framework is a mix that encompasses face-to-face (see Chap. 4 by Spain), online (see Chap. 6 by Findlay and O'Dwyer) and blended (see Chap. 9 by Karasmanis and Murphy; Chap. 10 by Spain and Mackay; Chap. 11 by O'Hanlon and Karasmanis; Chap. 16 by Ripoli, Carey, Chong and Ondracek) modes of delivery. What emerges from the La Trobe practice-based examples in this book is that librarians' own digital dexterity and fluency is an

important ingredient—alongside pedagogical understanding—in creating engaging online learning activities across all delivery modes.

In relation to curricular programmes the LLTP Framework brings together all three elements of the La Trobe Model for connecting the library to the curriculum. Section 2.3 of the LLTP Framework specifically outlines how the pedagogical notion of constructive alignment is used for systematically embedding IL into subject and course design (Fig. 3.3). In this way information literacy ILOs, learning activities and assessments are explicitly linked to discipline-specific scenarios.

Appended to the LLTP Framework is the Information Literacy Matrix (ILM), which lists information literacy ILOs relevant to the La Trobe graduate capability of 'Research and Evidence-Based Inquiry'. 'Research and evidence-based inquiry' is the ability to identify, analyse and interpret data and information in various forms to draw connections across fields of knowledge. Subject ILOs related to 'Research and Evidence-Based Inquiry' tend to be broad so the detail in the ILM is used to identify the activities required to actively and authentically engage students in building IL skills. The verbs used in the ILOs in the ILM express what students need to learn and demonstrate to achieve capability in 'Research and Evidence-Based Inquiry'.

All subject level ILOs exist in the context of a year level and a course degree programme. To ensure that information literacy ILOs are appropriate to the level of learning that students are expected to demonstrate in a disciplinary context, the ILM sets out four capability levels—Foundation, Consolidating, Proficient and Advanced—across six information skill development areas taken from the *Australian and New Zealand information literacy framework, principles, standards and practice* (ANZIIL 2004). The capability levels in the ILM don't necessarily represent year
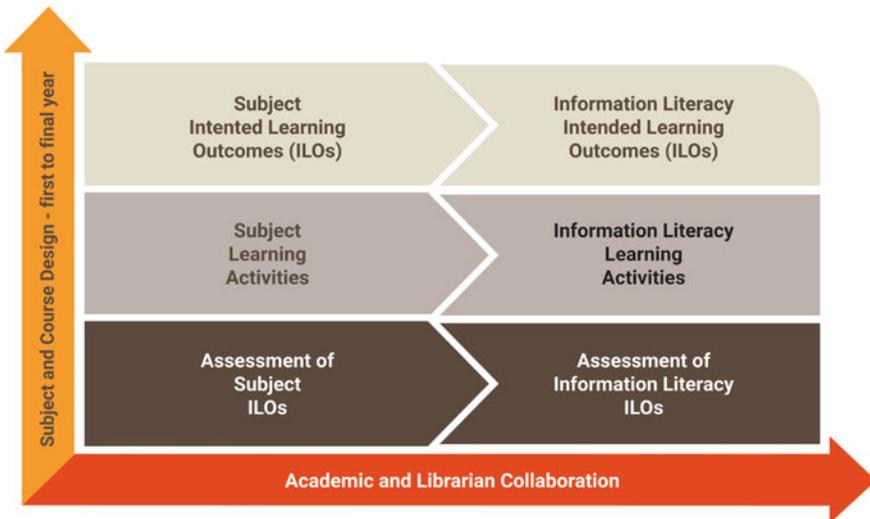
Fig. 3.3 LLTP Framework. Constructive alignment and information literacy by La Trobe University Library, used with permission

levels but are designed so knowledge and skill development can be progressively scaffolded across subjects and courses to ensure incremental development of skills based on prior experience. The aim is for all students to engage effectively with what they need to know, augment existing knowledge, and be confident in their IL capability from first year to final year. By providing clear statements for expected learning outcomes across four capability levels the ILM provides librarians with a tool to support the development of IL learning activities and assessment tasks.

3.3.1 Using the LLTP Framework to Connect the Library to the Curriculum

Constructive alignment and IL are a potent mix in subjects that have ILOs related to the relevant La Trobe graduate capabilities, i.e. 'Research and Evidence-Based Inquiry' or 'Digital Capability'. When developing a new course or reviewing an existing course, academics ensure appropriate Graduate Capabilities are integrated in subject intended learning outcomes (SILOs) or course intended learning outcomes (CILOs). Mapping where either 'Research and Evidence-Based Inquiry' or 'Digital Capability' are integrated in SILOs provides librarians with a trigger to use relevant ILOs from the ILM or the La Trobe Digital Literacies Framework (La Trobe University, 2016) to develop IL learning activities that are aligned with assessments. This approach works whether librarians are part of curriculum design teams or collaborating with an individual academic.

Examination of SILOs is the starting point to identify whether information and digital literacies need to be embedded in a particular subject or scaffolded across year levels in a course. This translation of theory into practice helps librarians to interpret the nature of the collaboration and ongoing curriculum conversations that may be required. In practice, we have characterised three levels of collaboration that may follow inspection and mapping of SILOs. The levels of collaboration were developed in response to a more recent curriculum refresh and redesign programme that required a focus on online modes of delivery.

Level 1: Embedded and constructively aligned—Level 1 refers directly to a constructively aligned approach for developing IL skills within discipline content. Level 1 collaboration is appropriate where SILOs or CILOs relate to achievement of the La Trobe Graduate Capabilities of 'Research and Evidence-Based Inquiry' or 'Digital Capability'. At this level the ILM is used to design, sequence and embed online or blended IL learning activities, and assessment tasks in the curriculum to ensure students achieve learning outcomes. Co-curricular programmes and services provided by the library are also part of the support available for students.

Level 2: Integrated resources—At Level 2 collaboration is required even though SILOs don't explicitly relate to achievement of 'Research and Evidence-Based Inquiry' or 'Digital Capability'. IL skill development may have been embedded in a prerequisite subject, but in order to be successful, some students may need

ongoing support to find and use library resources for building discipline knowledge or completing assessment tasks. Therefore, at this level librarians collaborate with academics on online resource curation, online assessment help guides and integrating existing relevant self-help online instructional materials in the learning management system. Students are also connected to co-curricular programmes and services provided by the library.

Level 3: Partnership opportunity—In Levels 1 and 2 there is a clear path to collaboration and it is well established. In contrast, Level 3 is about the librarian recognising an opportunity to start a conversation with an academic when a relationship or partnership doesn't yet exist. These examples include subjects outside the curriculum redesign process, new subjects or courses, or subjects with new coordinators who don't have an existing relationship with the library.

These levels of collaboration are a guide for librarians as they cross institutional boundaries to engage with a wider spectrum of learning and teaching concepts and agendas (Salisbury et al. 2102; 2013). As third space professionals, librarians have shifted from teaching *into* the curriculum, toward taking shared responsibility for information literacy ILOs, learning activities and assessment tasks, which are aligned with subject ILOs, learning activities and assessment tasks. This has occurred and been supported through building our learning and teaching knowledge; as part of ongoing professional development, librarians undertake training on constructive alignment from the central La Trobe learning and teaching unit. This training provides library staff with an understanding of constructive alignment and builds capacity to use educational theory in IL teaching practice.

3.4 Conclusion

This chapter reviewed the literature that supports the LTUL Model. It has explored both collaborative relationships between librarians and academics where the primary focus is to embed IL into the curriculum, and the extent to which academics and librarians use the theory of constructive alignment as the basis for their shared practice. For many librarians and academics working in partnership to embed IL in the curriculum, IL is truly embedded when it becomes part of the disciplinary content. The LLTP Framework guides librarians at La Trobe to use educational theory to make coherent connections between discipline content and embedded IL elements: ensuring the best learning outcomes for students and providing all students with opportunities to build on their existing IL knowledge and develop new skills.

Research demonstrates that there is an improvement in student IL learning outcomes when IL elements are connected with discipline content (Salisbury et al., 2013). The development of the LLTP Framework was informed by this evidence and our ongoing practice continues to be evidence-based; however, the La Trobe authors in this book focus on how collaboration between librarians and academics manifests in practice, and the role of the LLTP Framework in influencing how people work together to connect the library to the curriculum. In presenting the LTUL Model,

this chapter has promoted the benefits of linking educational theory and library practice. Our experience strongly suggests that a theorised approach for embedding IL in the curriculum makes sense, not only for improved programme design, achievement of learning outcomes and student success, but also for realising the potential of collaborative partnerships involving librarians, academics, and teaching and learning staff.

The case for 'embedding' IL has been increasingly promoted by teaching and learning librarians as the most effective method of providing students with opportunities to become discerning and critical users of information. At the same time the partnership between academics and librarians has been demonstrated to be the 'cornerstone of an IL programme that flourishes and endures on campus' (Curzon, 2004, p. 29). Conversations focused around educational theory mean academics and librarians can view their collaborative practice from the same perspective when aligning learning outcomes, teaching and learning activities and assessment tasks. Following Mackey and Jacobson's (2010) argument that collaborative endeavours only enhance the student experience, the LTUL practice-based examples in the following chapters show that the likelihood of a successful collaboration increases exponentially when a theoretical approach underpins practice.

References

American Library Association. (2000). ACRL Standards: Information literacy competency standards for higher education. *College & Research Libraries News, 61*(3), 207–215. https://doi.org/10.5860/crln.61.3.207

Argüelles, C. (2016). Information literacy instruction and assessment in a community college: A collaborative design. *Community & Junior College Libraries, 21*(3–4), 81–99. https://doi.org/10.1080/02763915.2016.1190995

Association of College & Research Libraries. (2003). *ACRL best practices initiative: Characteristics of programs of information literacy that illustrate best practices.* Retrieved from http://www.ala.org/acrl/standards/characteristics

Association of College and Research Libraries. (2015). *Framework for Information Literacy for Higher Education.* Retrieved from http://www.ala.org/acrl/standards/ilframework

Atwong, C. T., & Heichman Taylor, L. J. (2008). Integrating information literacy into business education: A successful case of faculty-librarian collaboration. *Journal of Business & Finance Librarianship, 13*(4), 433–448. https://doi.org/10.1080/08963560802202227

Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). *Australian and New Zealand Information Literacy Framework: principles, standards and practice (2nd ed.).* A. Bundy (Ed.). Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Badke, W. B. (2005). Can't get no respect: Helping faculty to understand the educational power of information literacy. *The Reference Librarian, 43*(89–90), 63–80. https://doi.org/10.1300/J120v43n89_05

Barr, N., Lord, B., Flanagan, B., & Carter, R. (2020). Developing a framework to improve information and digital literacy in a bachelor of paramedic science entry-to-practice program. *College & Research Libraries, 81*(6), 945–980. https://doi.org/10.5860/crl.81.6.945

Belanger, J., Bliquez, R., & Mondal, S. (2012). Developing a collaborative faculty-librarian information literacy assessment project. *Library Review, 61*(2), 68–91. https://doi.org/10.1108/00242531211220726

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education, 32*(3), 347–364.

Biggs, J. (2003). Aligning teaching for constructing learning. *The Higher Education Academy.* Retrieved from https://www.heacademy.ac.uk/sites/default/files/resources/id477_aligning_teaching_for_constructing_learning.pdf

Biggs, J. B., & Tang, C. S. (2007). *Teaching for quality learning at university: What the student does.* Maidenhead: Open University Press .

Blackall, C. (2002, February 6–8). *Rethinking information literacy in higher education: the case for informatics.* [Paper presentation]. Evolving information futures, 11th biennial conference and exhibition, Melbourne Exhibition and Convention Centre, Melbourne, Australia. https://www.vala.org.au/vala2002/2002pdf/10Blakal.pdf

Bostock, J., Graves, S., & Wilson, R. (2010). Collaboration in action: Designing an online assessment strategy for adult learners. In T.P. Mackey & T. Jacobson (Eds.), *Collaborative information literacy assessments: strategies for evaluating teaching and learning.* London: Facet Publishing.

Brown, C., & Krumholz, L. R. (2002). Integrating information literacy into the science curriculum. *College & Research Libraries, 63*(2), 111–123. https://doi.org/10.5860/crl.63.2.111

Bruce, C. (2001). Faculty-librarian partnerships in Australian higher education: Critical dimensions. *Reference Services Review, 29*(2), 106–116. https://doi.org/10.1108/00907320110394146

Bytoft Nyaas, E., & Süld, K. (2010, September 8–10). *Sustainable Collaboration: A Method to Integrate Discipline-Sensitive Information Literacy Modules at Programme Level.* [Paper presentation] Creating Knowledge VI, Bergen, Norway. Retrieved from https://www.diva-portal.org/smash/get/diva2:887145/FULLTEXT01.pdf

Carrie, D., & Mitchell, L. (2010). A Holistic approach to embedding information literacy in the design, delivery and assessment of an undergraduate business program. In T.P. Mackey & T. Jacobson (Eds.), *Collaborative information literacy assessments: strategies for evaluating teaching and learning.* London: Facet Publishing.

Chen, K.-N., & Lin, P.-C. (2011). Information literacy in university library user education. *Aslib Proceedings: New Information Perspectives, 63*(4), 399–418. https://doi.org/10.1108/00012531111148967

Coonan, E., & Secker, J. (2011). *A new curriculum for information literacy: executive summary.* Retrieved from http://ccfil.pbworks.com/f/ANCIL_final.pdf

Corrall, S., & Jolly, L. (2019). Innovations in learning and teaching in academic libraries: Alignment, collaboration, and the social turn. *New Review of Academic Librarianship, 25*(2–4), 113–128. https://doi.org/10.1080/13614533.2019.1697099

Curzon, S. C. (2004). Developing faculty-librarian partnerships in information literacy. In I.F. Rockman (Ed.), *Integrating information literacy into the higher education curriculum: practical models for transformation.* San Francisco: Jossey-Bass.

DaCosta, J. W. (2010). Is there an information literacy skills gap to be bridged? An examination of faculty perceptions and activities relating to information literacy in the United States and England. *College & Research Libraries, 71*(3), 203–222. https://doi.org/10.5860/0710203

Derakhshan, M., & Singh, D. (2011). Integration of information literacy into the curriculum: A meta-synthesis. *Library Review, 60*(3), 218–229. https://doi.org/10.1108/00242531111117272

Dolan, D. V., & Martorella, G. (2003). Discipline-based information literacy and the lifelong learner. *International Journal of Lifelong Learning, 10*, 1319–1334.

Edwards, S. L., & Bruce, C. (2004). The assignment that triggered change: Assessment and the relational learning model for generic capabilities. *Assessment & Evaluation in Higher Education, 29*(2), 141–157. https://doi.org/10.1080/0260293042000188447

Farrell, R., & Badke, W. (2015). Situating information literacy in the disciplines: A practical and systematic approach for academic librarians. *Reference Services Review, 43*(2), 319–340. https://doi.org/10.1108/RSR-11-2014-0052

Feekery, A., Emerson, L., & Skyrme, G. (2016). Supporting academics to embed information literacy to enhance students' research and writing process. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines.* Boulder, Colorado: University Press of Colorado. https://doi.org/10.37514/PER-B.2016.0834.2.17

Flaspohler, M. (2012) Engaging First-Year Students in Meaningful Library Research: A Practical Guide for Teaching Faculty. Chandos Publishing.

Fleming-Castaldy, R. P. (2018). Developing occupational therapy students' information and historical literacy competencies: An interprofessional collaborative project. *Journal of the Medical Library Association, 106*(3), 340–351. https://doi.org/10.5195/jmla.2018.332

Fosmire, M. (2012). Information literacy and engineering design: Developing an integrated conceptual model. *IFLA Journal, 38*(1), 47–52. https://doi.org/10.1177/0340035211435071

Gosling, C., & Nix, I. (2011). Supported open learning: Developing an integrated information literacy strategy online. In T. P. Mackey & T. E. Jacobson (Eds.), *Teaching information literacy online.* New York: Neal-Schuman Publishers.

Grafstein, A. (2002). A discipline-based approach to information literacy. *Journal of Academic Librarianship, 28*(4), 197–204. https://doi.org/10.1016/S0099-1333(02)00283-5

Hunt, F., & Birks, J. (2004). Best practices in information literacy. *Portal: Libraries and the Academy, 4*(1), 27–39.

Jacobson, T., & Mackey, T. (2007) *Information Literacy Collaborations That Work*. Neal-Schumann Publishers

Jenkins, P. O. (2005) *Faculty-Librarian Relationships*. Chandos Publishing.

Johnson, A. M., Jent, S., & Reynolds, L. (2007). Library instruction and information literacy 2006. *Reference Services Review, 35*(4), 584–640. https://doi.org/10.1108/00907320710838408

Johnston, B., & Webber, S. (2003). Information literacy in higher education: A review and case study. *Studies in Higher Education, 28*(3), 335–352.

La Trobe University. (2016). *Skills for a digital world: Digital literacies framework*. Retrieved from https://doi.org/10.26181/605824eac675c

La Trobe University Library. (2019). *Library Learning and Teaching Partnership Framework*. Melbourne: La Trobe University. Retrieved from https://doi.org/10.26181/6051815fa87e4

La Trobe University (2020). Schedule A of *Graduate Capabilities Policy*. Melbourne: La Trobe University. Retrieved from https://policies.latrobe.edu.au/document/view.php?id=218

Lach, P. R., & Pollard, E. A. (2019). Visualizing history in the classroom: A faculty-librarian partnership in the digital age. *New Review of Academic Librarianship, 25*(2–4), 335–356. https://doi.org/10.1080/13614533.2019.1627562

Lavoie, D., Rosman, A., & Sharma, S. (2011). Information literacy by design: Recalibrating graduate professional asynchronous online programs. In T.P. Mackey & T.E. Jacobson (Eds.), *Teaching information literacy online.* New York: Neal-Schuman Publishers.

Llewellyn, A. (2019). Innovations in learning and teaching in academic libraries: A literature review. *New Review of Academic Librarianship, 25*(2–4), 129–149. https://doi.org/10.1080/13614533.2019.1678494

Lindstrom, J., & Shonrock, D. D. (2006). Faculty-Librarian collaboration to achieve integration of information literacy. *Reference & User Services Quarterly, 46*(1), 18–23.

Lipu, S. (2003). A Flying start for our future teachers. *Behavioral & Social Sciences Librarian, 22*(1), 47–73. https://doi.org/10.1300/J103v22n01_05

Lupton, M. (2004). Curriculum alignment and assessment of information literacy learning. In Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). *Australian and New Zealand Information Literacy Framework: principles, standards and practice (2nd ed.).* A. Bundy (Ed.). Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Mackey, T. P., & Jacobson, T. (2010) *Collaborative Information Literacy Assessments: Strategies for Evaluating Teaching and Learning.* Facet Publishing.

Maybee, C., Bruce, C. S., Lupton, M., & Rebmann, K. (2013). Learning to use information: Informed learning in the undergraduate classroom. *Library & Information Science Research, 35*(3), 200–206.

McGuinness, C. (2006). What faculty think: Exploring the barriers to information literacy development in undergraduate education. *The Journal of Academic Librarianship, 32*(6), 573–582. https://doi.org/10.1016/j.acalib.2006.06.002

Miller, L. C., Jones, B. B., Graves, R. S., & Sievert, M. C. (2010). Merging silos: Collaborating for information literacy. *Journal of Continuing Education in Nursing, 41*(6), 267–272. https://doi.org/10.3928/00220124-20100401-03

Pham, H. T., & Tanner, K. (2014). Collaboration between academics and librarians: A literature review and framework for analysis. *Library Review, 63*(1/2), 15–45. https://doi.org/10.1108/LR-06-2013-0064

Phelps, S. F., & Campbell, N. (2012). Commitment and trust in librarian–faculty relationships: A systematic review of the literature. *The Journal of Academic Librarianship, 38*(1), 13–19. https://doi.org/10.1016/j.acalib.2011.11.003

Rockman, I. F. (2004) *Integrating information Literacy into the Higher Education Curriculum: Practical Models for Transformation.* Jossey-Bass.

Ruge, G., Tokede, O., & Tivendale, L. (2019). Implementing constructive alignment in higher education—cross-institutional perspectives from Australia. *Higher Education Research & Development, 38*(4), 833–848. https://doi.org/10.1080/07294360.2019.1586842

Rutledge, L., & LeMire, S. (2017). Broadening boundaries: Opportunities for information literacy instruction inside and outside the classroom. *Portal: Libraries and the Academy, 17*(2), 347–362.

Salisbury, F., (2009). *Building blocks: Embedding inquiry/research (information literacy) graduate capabilities into the curriculum* (Report). Retrieved from http://hdl.handle.net/1959.9/476991

Salisbury, F., Corbin, J. and Peseta, T., (2013, April 15–18). *From cornerstone to capstone: Information literacy collaboration across the curriculum.* [Paper presentation]. Proceedings of the IATUL Conferences. Paper 20. Cape Town, South Africa. https://docs.lib.purdue.edu/iatul/2013/papers/20

Salisbury, F. A., Karasmanis, S., Robertson, T., Corbin, J., Hulett, H., & Peseta, T. L. (2012). Transforming information literacy conversations to enhance student learning: New curriculum dialogues. *Journal of University Teaching and Learning Practice, 9*(3), 4.

Salisbury, F., & Sheridan, L. (2011). Mapping the journey: Developing an information literacy strategy as part of curriculum reform. *Journal of Librarianship and Information Science, 43*(3), 185–193. https://doi.org/10.1177/0961000611411961

Samson, S. (2010). Information literacy learning outcomes and student success. *The Journal of Academic Librarianship, 36*(3), 202–210. https://doi.org/10.1016/j.acalib.2010.03.002

Saunders, L. (2012). Faculty perspectives on information literacy as a student learning outcome. *The Journal of Academic Librarianship, 38*(4), 226–236. https://doi.org/10.1016/j.acalib.2012.06.001

Sjoberg, L. M., & Ahlfeldt, S. L. (2010). Bridging the gap: Integrating information literacy into communication courses. *Communication Teacher, 24*(3), 131–135. https://doi.org/10.1080/17404622.2010.489193

Stubbings, R., & Franklin, G. (2006). Does advocacy help to embed information literacy into the curriculum? A case study. *Innovation in Teaching and Learning in Information and Computer Sciences*, *5*(1), 1–11. https://doi.org/10.11120/ital.2006.05010004

Tagge, N. (2018). Leveraging accreditation to integrate sustainable information literacy instruction into the medical school curriculum. *Journal of the Medical Library Association*, *106*(3), https://doi.org/10.5195/jmla.2018.276

Treleaven, L., & Voola, R. (2008). Integrating the development of graduate attributes through constructive alignment. *Journal of Marketing Education, 30*(2), 160–173. https://doi.org/10.1177/0273475308319352

Ward, H., & Hockey, J. (2007). Engaging the learner: Embedding information literacy skills into a biotechnology degree. *Biochemistry and Molecular Biology Education, 35*(5), 374–380. https://doi.org/10.1002/bmb.79

Webster, C. M., & Kenney, J. (2011). Embedding research activities to enhance student learning. *International Journal of Educational Management, 25*(4), 361–377. https://doi.org/10.1108/09513541111136649

Whitchurch, C. (2012) *Reconstructing Identities in Higher Education: The Rise of 'Third Space' Professionals.* Taylor and Francis.

Winterman, B., Donovan, C., & Slough, R. (2011). Information literacy for multiple disciplines: Toward a campus-wide integration model at Indiana University Bloomington. *Communications in Information Literacy, 5*(1), 38–54.

Yager, Z., Salisbury, F., & Kirkman, L. (2013). Assessment of information literacy skills among first year students. *The International Journal of the First Year in Higher Education, 4*(1), 59–71.

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Part II
Case Studies Theme 1—Enabling Collaborative Partnerships

Chapter 4
Five Pillars to Bridging the Legal Research Skills Gap in Law

Melissa Spain

Abstract This case study describes how a librarian used the La Trobe University Library Learning and Teaching Partnership Framework (LLTP Framework) to build a collaborative partnership with academic teaching staff, to embed legal research skills into the Juris Doctor postgraduate degree. The LLTP Framework and the related Information Literacy Matrix serve as a guide for librarians to forge partnerships with academics to incorporate research skills and information literacy into subjects and courses. As part of this case study, I discuss how such a partnership evolved over a series of conversations about embedding legal research skills into a core first semester subject. The case study shows how successful collaboration using the LLTP Framework's principles enables the teaching of these skills to be embedded into the curriculum, adopting the pedagogical practice of constructive alignment for optimal student learning and to bridge the known legal research skills gap in law graduates.

4.1 Introduction

Collaboration and partnership, constructive alignment, and information and digital literacies are pivotal to the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019) used at La Trobe University Library (LTUL). Fundamental to the success of these concepts is the establishment of collaborative partnerships between library staff and faculty academic teaching staff. When I began in the role of librarian at LTUL, the Juris Doctor (JD) course was relatively new; it is a postgraduate course offered full time over three years. An opportunity arose to establish a collaborative partnership with the course coordinator, who was also the academic responsible for teaching a core first year JD law subject. Our first informal meeting over coffee began with a chat about reading list requirements for that subject, but quickly evolved into a discussion about the ways critical legal research skills could be embedded in the entire JD curriculum. We agreed on the importance of these skills and how embedding skills in the course might bridge

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the acknowledged research skills gap between university study and the workplace. This case study outlines the process of leveraging such a collaborative partnership to implement the LLTP Framework into the JD course.

4.2   Laying the Foundations

From the outset in my collaboration with the JD course coordinator we discussed the known skills gap that exists for law graduates entering the workplace. The gap between the practical legal research skills of law students on completion of their degree, and the skills required on day one in the workplace has been well recognised and documented in the literature (see Babacan, 2013, p. 28; Cordon, 2011, p. 395; ALTC, 2010, p. 19). This gap is global in scope and not limited to any one institution or country. Kim-Prieto (2019, p. 5) provided a great snapshot of countries that have recognised and started to address the gap within the law curriculum.

My previous experience as a librarian in a law firm provided the understanding of what a graduate needs on their first day in order to efficiently execute a research task and the value placed on legal research skills by employers. This industry experience enabled me to identify areas in the JD where skills could be successfully embedded and scaffolded across the course, providing students with the research skills required for legal research beyond university. Sharing this experience with students also enables me to say with authority 'you will need these skills not only now but also as a legal professional'. When students understand that research skills are relevant to their university assessments and to future work, they become more engaged and receptive.

An informal environmental scan and literature review I conducted in 2017, just after I started at LTUL, revealed that Australian university practices often addressed the skills gap by offering generic legal research skills classes at the start of the law course. The literature is clear that the most effective way to teach these skills is by scaffolding and embedding the skills throughout the entire course, not just as separate legal research skills classes at the start of the course without context to a law subject. Clinch (2006 p. 36) discusses phasing in different elements of legal research as the students' progress through the course, introducing different skills as they develop. Kauffman (2010, p. 348) stated that an effective way of teaching legal research for work-ready practice is to embed it into the course at 'point of need'. Embedding at point of need in the law course requires cooperation and collaboration with teaching staff to develop learning objects that directly relate to subject assessments. It is optimal that a relevant subject research example or scenario is used to teach the basic skills, such as locating an authoritative version of a case and legislation, through to the more complex requirements such as finding judicial consideration or researching secondary materials to produce a legal analysis. McLaurin and Presser (2005, p. 247) stated that for embedded learning to work the 'key success factors include interactivity, integration with core law content, and collaboration between librarians, faculty,

students and other stakeholders'. This echoes our LLTP Framework's principles on the value of effective collaboration.

Beyond the legal research skills gap, the literature also comments on the importance of teaching graduates to critically evaluate the material they have sourced online. The rapid technological change in publication of online legal materials, together with the inclination for students to 'google' answers, means that the authority and authenticity of the material retrieved may be compromised. The instant answers offered online entice students, but they often lack the skills to discriminate between authoritative and non-authoritative sources, or even identify cleverly disguised false information. There is increasing discussion on the importance of teaching search strategy and analysis, including preparing a written strategy, identifying key concepts, key facts and background, as well search strings, synonyms and the best sources to use. As Linz (2015 p. 24) stated 'though research analysis and planning is not particularly difficult, it is a new skill for law students to acquire'.

At my first meeting with the JD course coordinator over a coffee, we examined the reading list for a core first-year JD subject, 'Legal Process Methods and Institutions' (LPMI). However, he was also very enthusiastic and willing to discuss the skills gap. More importantly, he was interested in collaborating to embed a legal research skills seminar into LPMI with this component being taught by me. Ideally, the search strategy component would be introduced and embedded in the first-year subjects, linked to course assessments and scaffolded, as students progressed. In this way, by graduation, students should have built up a consistent practice of research. The ultimate goal would be to have a consolidation workshop at the end of their course, which could include simulations on what to expect in practice. With this as our aspiration and using the LLTP Framework as a guide, I set upon the task.

4.3 The Five Pillars of the Legal Research Skills Bridge

4.3.1 The First Pillar—Coffee and Connection for Collaboration

As previously stated, my collaborative bridge-building partnership with the JD course coordinator commenced with the foundation established in the library coffee shop. I emphasise this because these conversations can occur either formally or informally depending on the preference of the academic. In this case, the coffee and conversation were initiated to discuss required texts for reading list material for LPMI, and this provided an opportunity to broach the topic of research skills in the context of legal research. By seeking out opportunities where appropriate to raise the skills gap dilemma, offering possible solutions, and emphasising the benefits of aligning skill development with assessment requirements, I was able to address the broader issue of the legal research skills gap. Using the LLTP Framework as a guide, informed by my recent work with graduates in law firms and my recent literature review, I was

able to discuss with authority the value of research skills in the workplace. Our coffee conversation led to embedding a one-hour face-to-face seminar in the curriculum for the LPMI students. Following the constructive alignment principles, we agreed that the seminar would be structured around a topic similar to the assessment task, and our collaboration was firmly established when a topic was agreed upon. The topic was centred on researching access to justice for marginalised Australians.

The LPMI subject intended learning outcomes (SILOs) that best aligned to legal research skills was to 'Demonstrate advanced knowledge of the framework of the Australian legal system including its core institutions and sources of law'. The criteria for the assessment, an oral presentation, required researching relevant legal sources. Although these students were postgraduates, they were first-year law students, and most knew very little about legal research or the law. Given that this was the only opportunity to teach these skills, the challenge was to limit the amount of information to that which could be conveyed in the one-hour face-to-face session. The course coordinator and I agreed that the seminar should introduce writing a search strategy, and the key sources used for legal research, cases and legislation, all of which are fundamental to effective legal research.

4.3.2   The Second Pillar—Engaging Students Whilst Teaching the Skills

JD postgraduate students have deliberately chosen law as a second qualification, consequently, they are often more open to engaging in developing legal research skills than many undergraduate students and have a genuine curiosity and desire about finding the law and relevant sources. Even so, legal research is a unique type of research, and engagement in these sessions is essential so I developed a session outline that covered writing a search strategy, using search operators and practical demonstrations in the databases for finding cases and legislation. Given the limited time allocation, I encouraged student engagement by using demonstrations of the live databases that they would use for their assessments, and current topics related to the assessment. However, although overall student feedback was favourable, student evaluation of the sessions indicated that too much information was presented in a short time which some students found overwhelming, thus compromising engagement.

4.3.3   The Third Pillar—Conversation, Collaboration and More Coffee

As a result of student feedback, our next coffee conversation included ways to address the information overload to make the session less overwhelming and more hands on. To improve future seminars and to retain the most valuable content, we agreed on a

longer time allocation and more time for individuals to practise skills presented. It was agreed that allocating two hours would allow time for content delivery and student interaction, with hands-on practise using the databases. Moving from a seminar to this interactive workshop approach where students actively used legal databases further increased student engagement and enhanced the learning experience.

After each semester, continual conversation (and sometimes coffee) with the course coordinator about the success of each session, together with acknowledging the students' consistent comments about more time, we increased the session duration from one to two hours, and eventually into a four-hour workshop. The progressive allocation of more time for the session not only enhanced student learning but also demonstrated that the course coordinator valued the teaching of these skills by allowing precious teaching time to develop these skills in students. It is an indication of the successful collaboration in establishing the parameters for the workshop and an example of a fruitful partnership involving mutual support to enable the embedded teaching of these skills within the law course.

4.3.4   The Fourth Pillar—Scaffolding the Bridge

The continued success of the longer workshops formed a basis to extend the conversation with the course coordinator beyond intervention into one subject—to the entire JD course. Drawing further on my literature review on the legal research skills gap in graduates, we agreed to scaffold the skills into more subjects across the JD with the aim to reduce this gap. To identify subjects where skills development could be embedded, I conducted a review of the SILOs and the assessment requirements within each JD subject across the course. For some subjects the SILOs had direct relevance to legal research and for others, the assessment rubric criteria held the relevance (see Table 4.1). I then used the Information Literacy Matrix (ILM), to determine the relevant level of capability required in each subject to ensure adequate scaffolding across year levels.

Simultaneously to this process, I became a member of a group of corporate law and university librarians who were developing a set of core legal research literacy competencies for law graduates, to address the legal research skills gap. The group was formed after an Australian Law Librarians Association (ALLA) workshop on addressing this gap, and the resulting output was a set of core legal research competencies for law graduates (Australian Law Librarians Association, 2019), as a guide for law librarians. Joining the group was both strategic and perfectly timed as I was able to use this authoritative guide (endorsed by both the legal industry and university law librarians) to map the competencies to the capability levels identified in the ILM. The four capability levels identified in the ILM are Foundation, Consolidating, Proficient and Advanced. The four essential competency areas for the development of legal research skills in the ALLA guide are Legislation, Case Law, Commentary Research, and Plan and Conduct Research. Within each of these four areas is a sub-list of competencies that are required for any law graduate. The ILM enabled me

Table 4.1 Mapping JD subject SILOs and assessments to legal research skills and rubric

Subject	Year	Sem	Assessment	SILO	Assessment rubric criteria	ALLA competency	ILM
Legal process, methods and institutions[a]	1	1	1. Oral presentation. Research assignment on access to justice 2. Case Note	Demonstrate advanced knowledge of the framework of the Australian legal system including its core institutions and sources of law		Legislation Case Law Commentary Plan Research	Foundation
Constitutional law[a]	1	2	Summary/Outline of Argument—Case		Supports all arguments with evidence, reasons and authoritative sources	Case Law Commentary Plan Research	Consolidating
Statutory interpretation	1	2	Using legislation and extrinsic materials to address the assessment tasks Practice Problem Research Assignment Essay		Working with Legislation Locating legislation Locating extrinsic materials	Legislation Plan Research	Consolidating
Evidence and criminal procedure	2	1	Research Assessment	Ability to research the law at an advanced undergraduate level	Analyse, research and solve a legal problem relating to a fact situation arising in Criminal Procedure and Evidence law	Case Law Legislation Commentary Plan Research	Advanced

(continued)

Table 4.1 (continued)

Subject	Year	Sem	Assessment	SILO	Assessment rubric criteria	ALLA competency	ILM
Equity and trusts	2	2		Demonstrate high level research skills in relation to primary and secondary sources of equity and trusts law and its context	Consult and use a range of appropriate research materials	Case Law Legislation Commentary Plan Research	Proficient
Legal practice[a]	3	1	Discussion Paper on a topic related to PPC for submission to government	Research and reflect on current issues pertaining to legal practice in Victoria	Research using materials that are relevant and appropriate	Commentary Legislation Case Law Plan Research	Proficient
Remedies[a]	3	2	Research essay		Selection and utilisation of appropriate primary and secondary materials with correct referencing	Commentary	Proficient

[a]Legal research skills workshops currently embedded in these subjects

to match these competencies from the Foundation to Advanced level; it gave me an authoritative framework that academics recognised and connected with. Using the ILM in conjunction with the ALLA guide, I was able to map the skill and proficiency level to a subject assessment task that required that particular skill, as shown in Table 4.1.

For example, the first-year semester-one subject (LPMI) workshop delivered foundation skills for finding legislation, cases and commentary for their assessment. In the second semester, building on the case law skills learned in LPMI, the 'Constitutional Law' subject required a summary/outline of a case which involves higher level case law research skills. The foundation skills that were learned in the first semester were extended in the second semester to develop more sophisticated techniques for case law research. This scaffolded approach satisfied the required level to reach the Consolidating stage within the ILM. Furthermore, to build on the legislation research skills taught in LPMI, the second semester core 'Statutory Interpretation' subject provided an opportunity to teach higher level legislation research skills. The assessment involved interpretation of legislation using legislative extrinsic materials, ultimately delivering the Consolidating level skills of the ILM. With optimism and the LLTP Framework as a guide, I developed a plan for scaffolding across the entire JD course, by mapping SILOs, assessment rubric criteria for an individual assessment task, legal research competencies, and relevant levels of proficiency within the subjects. This process identified where the legal research skills could be taught for the optimal learning result; starting with introductory legal research skills, such as identifying and locating cases and legislation through to finding in-depth commentary (see Table 4.1).

To date my network of collaborators in embedding legal research skills in the JD course includes the course coordinator and some of the subject coordinators, but the challenge ahead is to gain support and trust from other subject coordinators to embed these skills in their subjects. In some subjects where I have identified SILOs and assessments related to legal research, the academics feel they do not have room for research skills learning activities in their subject, and others are less open to incorporating practical legal research workshops in their subject. One way to break down this barrier is to leverage the buy-in from the discipline academics who are already successfully embedding the legal research workshops into their subjects. Positive student feedback and a course coordinator who champions the cause are all invaluable in validating the importance of embedding the skills into subjects. It is then a matter of seeking out opportunities with discipline academics, preferably in person (with or without coffee), to discuss possibilities.

4.3.5 The Fifth Pillar—Crossing the Bridge to Legal Research Skills Competency

There is room for expanding research skills assessment in each subject and whilst I am not at this stage yet, the next step after scaffolding the teaching of the skills throughout the JD is to incorporate an assessment task that can assess the student's competency with each of the essential legal research skills. Buelin et al. (2019, p. 22) stated that 'formative assessment can take on many forms'. A formative assessment in the form of a search strategy could be used. This would require students to plan their database searching including identifying key concepts, brainstorming keywords, writing search strings and identifying the databases to use, as well as keeping a record of where they have searched. The literature suggests that formative assessment-related tasks are an effective method in student motivation and achievement (Cauley & McMillan, 2010) and in a course where students are overloaded with readings and assessments, an incentive must be given to enable students to fully engage. This may be in the form of a search strategy plan with a requirement to attach this as part of their assessments as shown in Fig. 4.1.

Critical to the formative assessment model is not only the actual assessment but also the feedback delivered to the student which enables improvement and reflection on learning. It is anticipated that it would not be too onerous to add a requirement to the assessment criteria, asking students to develop a search strategy plan for each of the appropriate assessments. The strategy would outline the key legal concepts, keywords and search strings used for database searching, identifying the appropriate authoritative databases used, and keeping a record of where they have searched. This could be assessed as a five per cent component of the assessment, and ideally marked by the librarian, or it could simply be a requirement that it is handed in as a record of the research trail the students have undertaken.

To fully bridge the legal research skills gap at La Trobe University (La Trobe), we still need to implement our initial plan to holistically measure the readiness of students for legal research in the workplace at the completion of the student's law course. For example, a final workshop could be offered by the library, specifically preparing the student for the workplace and consolidating the legal research skills learned over the course by applying them to workplace simulated scenarios. There could be a formative assessment aimed at reinforcing the skills learned which could take the form of a search strategy based on a research question typical to the workplace, which is then submitted for review by the librarian. This would lead to a Certificate of Legal Research Skills Competency. But that mission is beyond the scope of this case study.

Legal Research Strategy

Research Topic

How much do I know about this already?

What are the main legal concepts?	**Brainstorm key words and concepts.**

Possible search strings.

What sources to begin research? (cases, legislation, journals, textbook)

Specialised Resources for in-depth and detailed commentary:

Where have I looked? What databases have I checked?

Cases Still good Law		**Legislation** latest version		**Commentary** Date published	

Fig. 4.1 Legal research strategy

4.4 Bridging the Skills Gap—Reflections

Building bridges to span the gap between the legal research skills level of a graduate leaving university and the required skills level for the graduate in the workplace is not a quick process. I quickly learned after the first year that 'Rome was not built in a day', and neither was the bridge across the legal research skills gap. Scaffolding skills

into a law curriculum is a major undertaking for academics and librarians and may take several years of persistent collaboration and partnership to complete. The LLTP Framework is a valuable and adaptable tool which has given me the pedagogical basis and language to enable such a project. It can be used as a platform for partnering with academics to deliver the practical legal research skills that students require for university and the workplace. On reflection, the LLTP Framework has been of critical importance to the process of embedding and scaffolding skills, and an invaluable tool which provides the educational and pedagogical reference point for me as a newcomer to academic libraries. Whilst scaffolding this bridge, adaptations and modifications may be required to accommodate the available resources, especially in terms of time commitment. Academic librarians often liaise with academics across more than one course, and it is necessary to explore different ways of offering legal research skills training. For example, when the bulk of teaching is face to face, embracing technologies will allow you to record some of the skill teachings so that a truly blended approach can be delivered, and some content can be used across other law courses and subjects.

My own belief in the power of collaborative projects was also important. I respect that some academics do not have the same motivation or capacity in their subject structure to allocate chunks of time for teaching legal research skills. They too have agendas that must take priority, after all, they are there first and foremost to teach students the law. Timing is important, choose the right moment to broach the topic with academics, avoiding the busy exam time or start of semester. In investigating avenues for getting the message heard across the Law School, inclusion in the Law School Learning and Teaching Committee was extremely beneficial for this project. It allowed me to sit with academics from various subjects and be exposed to their subject planning and become part of the process.

Finally, collaboration and partnership requires patience and perseverance, as well as understanding that partnering to constructively align and scaffold legal research skills into a course may take time. But if we accept that the academics' priority must be teaching the law, and position the library in that process using a sound pedagogical model there can be room for embedding and scaffolding the teaching of legal research skills into law courses. I hope to see the fifth pillar of the La Trobe legal research skills bridge in place soon, and that this bridge will ensure that all graduates can cross over into the workplace with work-ready legal research skills.

References

Australian Learning and Teaching Council. (2010). *Bachelor of laws: Learning and teaching standards project statement*. NSW: ALTC.

Australian Law Librarians Association (ALLA). (2019). *Legal Research Competencies for New Law Graduates*. Retrieved from https://www.alla.asn.au/membership/alla-divisions/vic/legal-research-competencies-new-law-graduates/

Babacan, A. (2013). Significance of legal research skills and the implications on law academics and librarians. *Australian Law Librarian, 21*(4), 227–230.

Biggs, J. B., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). England: McGraw-Hill .

Buelin, J., Ernst, J. V., Clark, A. C., Kelly, D. P., & DeLuca, V. W. (2019). Formative evaluation techniques. . *Technology Engineering Teacher, 78*(5), 21–23.

Cauley, K. M., & McMillan, J. H. (2010). Formative assessment techniques to support student motivation and achievement. *Clearing House: A Journal of Educational Strategies, Issues and Ideas, 83*(1), 1–6. https://doi.org/10.1080/00098650903267784

Clinch, P. (2006). *Teaching legal research* (2nd ed.). Coventry, UK: UK Centre for Legal Education .

Cordon, M. C. (2011). Task mastery in legal research instruction. *Law Library Journal, 103*(3), 395–413.

Kauffman, B. (2010). Information literacy in law: Starting points for improving research competencies. *International Journal of Legal Information, 38*(3), 339–351.

Kim-Prieto, D. (2019, May 10). *Whither Law Student Information Literacy?*. Learning Information Literacy Across the Globe, Frankfurt, Germany. https://informationliteracy.eu/conference/assets/papers/LILG-2019_Kim-Prieto_Law-Student-IL.pdf

La Trobe University Library (2019). *Library Learning and Teaching Partnership Framework*. Melbourne: La Trobe University. https://doi.org/10.26181/6051815fa87e4

Linz, R. M. (2015). Research analysis and planning: The undervalued skill in legal research instruction. *Legal Reference Services Quarterly, 34*(1), 60–99. https://doi.org/10.1080/0270319X.2015.1013849

Mackay, A., & Chifflet, P. (2018). *Legal institutions and methods*. Pyrmont, NSW: Thomson Reuters.

McLaurin Smith, N., & Presser, P. (2005). Embed with the faculty: Legal information skills online. *The Journal of Academic Librarianship, 31*(3), 247–262.

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Chapter 5
Mastering Environment and Sustainability: How the Research Skills Development Framework Brought Harmony to an Interdisciplinary Program

Tami Lou Castillo and Susie Ho

Abstract An interdisciplinary degree represents a radical departure from traditional discipline based curricula as it integrates contrasting disciplines, pedagogical approaches as well as bodies of knowledge. As such, co-designing the Master of Environment and Sustainability (MES) at Monash University, an interdisciplinary Master's degree, involved educators spanning numerous sub-disciplines within and across Science, Business, and the Humanities. Conceptualising a new curriculum required a deliberate process to foster collaboration among these diverse educators. We needed to reach consensus as to how the boundaries between traditional discipline structures and ways of thinking could be harmonised, to create fluency between disciplines for learners of all backgrounds. Sensemaking in an interdisciplinary context is not only critical for educators but for students alike, as this cohort comes from diverse disciplinary, professional and cultural backgrounds. Addressing pedagogy and scaffolding boundary-spanning skills to support students' research capabilities, and interdisciplinary synthesis and analysis, was therefore a key focus of curriculum design. After attending workshops facilitated by librarians and learning skills advisers for MES educators on the Research Skill Development (RSD) framework, a decision was made to adopt this conceptual, adaptable, non-disciplinary specific model. It provided a way to interpret the research process in relation to boundary-spanning skill sets and guide curriculum design. We describe how the RSD framework promoted dialogue and collaboration and offered the benefit of a pedagogical structure to unify and harmonise disciplinary differences.

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5.1 Interdisciplinary Learning and Overview of the Masters of Environment and Sustainability

It has been recognised by global entities such as the United Nations that traditional monodisciplinary models of education do not develop the broader understanding and skills graduating students require to be able to effectively approach complex problems of the twenty-first century, such as climate change, poverty and food security (Coulibaly, 2019). Williams (2002) identified, for systemic change to take effect on a large scale, "new capacities are needed to manage conflict, interpersonal behaviour and fragmented and contested power relations" (p. 105). In recognition that complex environmental issues cannot be addressed through a single disciplinary lens, higher education world-wide has become increasingly interdisciplinary. The number of undergraduate and postgraduate offerings has grown substantially over the past 25 years (Brandenburge & Kelly, 2019; Irani, 2018).

In 2016, the Faculty of Science and the Faculty of Arts, along with the Monash Sustainable Development Institute and the Monash Business School, were tasked with co-developing the Master of Environment and Sustainability (MES). An interdisciplinary learning context focuses on finding solutions to world problems; however, this presents unique challenges for educators when designing curriculum and assessment (Brewer, 1999; Coops et al., 2015; de Greef et al., 2017). Students studying interdisciplinary degrees need to develop highly sophisticated 'boundary-spanning skills' or abstract interdisciplinary thinking, as well as 'knowledge brokering' (Ernst and Young LLP and Federation of Indian Chambers of Commerce and Industry, 2018). They need to integrate knowledge, skills and frameworks using advanced synthesis and critical thinking. The course vision was therefore to develop and integrate students' specialist and boundary-spanning expertise across multiple domains, to enable graduates to approach complex multidimensional issues of our time. Second to this was the aim of facilitating collaborative partnerships across the university itself, with a view to breaking down traditional departmental silos in both education and research.

Students were drawn from 35 different nations, from Botswana to France, and a plethora of disciplinary backgrounds (e.g., fashion, biomedical studies, engineering). Students in the course would specialise in one domain usually associated with their professional background or aspirations (e.g., governance, corporate sustainability, environmental security, leadership or international development). They would also be expected to learn and integrate elements of these five different domains in their foundational interdisciplinary core studies and final interdisciplinary advanced practice units (subjects). It is crucial to scaffold and support this higher level integration of diverse knowledge and skills. Within the interdisciplinary literature, students report that they can feel overwhelmed and confused by unclear disciplinary boundaries and become exasperated by the need to master an unbounded knowledge base. They can also lack familiarity with assessment genres and academic conventions outside their own discipline (Klaassen, 2018). For example, STEMM students may not be familiar with social science assessments focused upon perspectives or critical analysis.

5.2 Reframing Thinking for a New Interconnectedness

Developing a response to highly complex sustainability issues, requires a dynamic integrated relationship between disciplinary fields of study, policy and society (Bednarek et al., 2018) and one which goes beyond the rigidities of conventional disciplines (Wilson, 2010). Schon (1991) explained that the difficulty in achieving this is significant because when we are faced with problematic situations we frame our thinking by our disciplinary backgrounds, organizational roles, past histories, interests, political and economic perspectives. Therefore, creating a new interconnectedness between traditionally conceived disparate areas of knowledge requires a way to reconceptualise, reframe and refresh how we think about types of knowledge and what behaviours are needed to be able to span traditional boundaries (Williams, 2002; Bednarek et al., 2018).

Understanding the different perspectives and constraints of other sectors, disciplines and communities, and the ability to collaborate within diverse teams across a range of disciplinary areas and cultures requires boundary-spanning skills (Alkaher & Goldman, 2018; Brown et al., 2015). Boundary-spanning skills are demonstrated by individuals who show the ability to manage a range of interdependencies, traits and dispositions that transcend a knowledge-base and include interpersonal relationships to build social capital. Williams (2002) characterises Boundary Spanners with skills and attributes to be able to "build cultures of trust, improve levels of cognitive ability to understand complexity and be able to operate within non-hierarchical environments with dispersed configurations of power relationships." (p. 106) Bednarek et al. (2018) note that cultivating the thinking and behaviour required for boundary-spanning has the potential to increase the usefulness of research and the impact of future professionals by "fostering the capacity to absorb new evidence and perspectives into sustainability decision making, enhance research relevance for societal challenges, and open new policy windows" (Bednarek et al., 2018 p. 1177).

With the complexity and sophistication of these skills in mind, co-creating a cutting-edge curriculum for the MES to explicitly develop students' boundary-spanning skills for future work environments and research across knowledge, social, political and institutional boundaries was a challenging undertaking.

5.3 Unique Challenges of Co-designing an Interdisciplinary Curriculum

Current models of interdisciplinary education focus on teaching different disciplinary content around a central theme, like climate change, to show different disciplinary perspectives on this issue. However, less is known about how to genuinely co-teach and co-develop curriculum at a deeper level rather than this 'bolt on' approach. The interdisciplinary curriculum can therefore be perceived as disjointed at the subject

or degree level unless it is underpinned by a priori framework that supports educators to collaboratively establish meaningful connections across multiple disciplines and forms of knowledge (Lindvig et al., 2017). Tripp and Shortlidge (2019) emphasised that a guiding framework supports educators to integrate different perspectives, expertise and research cultures rather than relying on students to integrate the knowledge presented independently; however, it must be flexible enough to be adapted by educators from disparate contexts. Successful integration and harmonisation of disciplines and expertise around a theme is therefore contingent on the strength of the collaboration among educators and the establishment of an approach to curriculum using a mutually understood language (Bardecki & Millward, 2020; Tinnell et al., 2019).

In consideration of the unique challenges for interdisciplinary studies and the new MES course, educators identified the need for a pedagogically sound approach that would underpin and guide the co-design of a new curriculum. Although this was identified as a need, pedagogical tools with the flexibility and adaptability to bring together educators and unify contrasting disciplines are lacking. Frameworks that do exist for interdisciplinary curriculum seem to be content-driven or competency based (Tripp & Shortlidge, 2019; Gantogtokh & Quinlan, 2017; Full et al., 2015). Torres (2018) notes that 'the lack of appropriate pedagogical tools with the educational language and disciplinary flexibility to describe how research-related skills can be explicitly developed and articulated as acknowledged outcomes of learning' (p. 3). More importantly, existing interdisciplinary frameworks lack a theoretically informed learning continuum to guide progressive skill development.

What MES educators needed was, therefore, a robust pedagogical tool that could be applied as a guiding framework to collaboratively harmonise and constructively align boundary-spanning skills for an interdisciplinary curriculum. Due to different educational cultures, the framework should provide a shared understanding and language. Of importance was the ability of the tool to inform a cohesive course structure with appropriate skills development to ensure students from all backgrounds are appropriately challenged and supported.

5.4   Identifying Criteria for a Suitable Pedagogical Tool

As the first co-developed inter-faculty course at Monash University, the MES would be difficult to design. The challenge facing interdisciplinary educators was finding a way to ensure that curriculum and assessment design, as well as teaching practices, use language that does not assume tacit knowledge of a discipline's conventions, assessment types or terminology. Therefore to move this new interdisciplinary degree forward, MES educators sought to identify a suitable empirically validated pedagogical tool to guide curriculum and assessment design that had the flexibility and adaptability to underpin an interdisciplinary context. The tool needed to facilitate a range of educational objectives which were:

- Demonstrated empirical validation across disciplines (non-disciplinary specific)
- Facilitated the integration of disciplines (flexible and adaptable)
- Guided curriculum and assessment design (frame assessment tasks, scaffold skills development at the course level)
- Enabled a shared pedagogical approach
- Informed curriculum mapping (with a focus on students' research skills)

To facilitate the education objectives noted above, the tool needed to encourage new conversations that catalysed collaboration among MES educators and library staff supporting student learning in this space. The criticality of collaboration meant that the tool needed to support a diverse range of educators to:

- Establish a shared understanding of educational objectives
- Encourage collaboration through a mutually understood language (cutting through jargon)
- Provide teaching and learning guidance to students from all backgrounds
- Harness the local knowledge-base and existing expertise

The initial critical step in activating the educational objectives identified above pointed strongly towards mapping curriculum to identify what skills students needed to develop to engage with the integrated knowledge and skills content of interdisciplinary coursework. This was particularly important because the student cohort is highly diverse in terms of disciplinary background, profession, and preferred learning style (Coops et al., 2015).

With the lack of suitable pedagogical tools to draw on to guide the co-development of the curriculum design process, the MES Course Coordinator was left with exploring and finding a solution to the following challenging questions:

Q.1 What is required for the traditional boundaries between discipline structures and ways of thinking to become harmonised in curriculum design, to create fluency between disciplines?

Q.2 How can a course be cohesively co-designed with appropriate skills development to ensure students from all backgrounds are appropriately challenged and supported?

5.5 Engaging the Expertise of Library Staff

Early conversations about mapping curriculum and skills development between the library and the MES coordinator revealed the potential of the Research Skills Development (RSD) framework (Willison & O-Regan, 2006, 2018) to achieve the educational objectives noted above. Library staff had been applying the RSD framework since 2009 in a range of disciplines and had addressed a variety of educational challenges through the application of this pedagogical tool (Torres & Jansen, 2016). Library staff also explained that an additional benefit of applying the RSD was its collaborative potential, as it offered a common platform and language to guide

and facilitate collaboration. The education MES team has expressed that they had encountered difficulties in understanding each other, particularly across STEMM and HASS, having differing interpretations of terms such as advanced skills or independent analysis. It therefore made sense to partner with Monash University Library (MUL), as librarians and learning skills advisers had acquired a deep knowledge-base and expertise with the RSD framework to address teaching, learning and curriculum challenges in a range of disciplines. Empirical knowledge gathered over time across disciplines was valuable in the context of a new interdisciplinary curriculum, as engagement and experience with the RSD framework extended to the same faculties who would be contributing to MES coursework. Collaboration with the library was therefore considered appropriate support for success in this challenging context.

5.6   Theoretical Underpinnings and Empirical Validation of the RSD Framework

The rationale for validating the RSD framework for application in the MES was considered in light of empirical studies in the published literature (Willison, 2018). The scholarly literature shows that the RSD framework has been successfully applied as a collaborative model to guide complex teams and projects and has built educational partnerships (Torres and Jansen, 2016) and in doing so the capacity for integrated curriculum (Paterson et al., 2013; Willison, 2014). For example, in its meta-analysis of a range of studies, Willison (2014) concluded that the RSD framework creates a collaborative environment (instead of competitive), which is important when considering that faculties are often in competition for students or research grants. The RSD is valuable for underpinning collaboration because of its flexibility and relevance to a range of disciplines and subject matter and in doing so creates a common language for diverse teams of educators (Torres & Jansen, 2016). The framework's terminology spans disciplinary boundaries and increases team confidence in 'learning and assessment in course-level context in a variety of disciplines' (Willison, 2014, p 16). As such, the RSD framework provides accessible terminology that transcends disciplines, while still providing sufficient flexibility for different disciplines to develop pedagogy within their particular learning context (Willison and O'Regan, 2007). Willison (2018) emphasises that:

> The RSD and its classification of levels of guidance can enable a clearer conceptual connection between otherwise separate studies, including studies using action research, ethnographic studies and quantitative studies, if it is used as a priori framework for constructs and for interpretation of findings for those studies. (Willison, 2018, p. 3)

In building a course that is coherent for students, one must evaluate how the different skills and knowledge being developed in each distinct disciplinary unit map out and contribute to course-level skill development (Loveys et al., 2014; Pretorius et al., 2013; Willison, 2017). As Willison (2018) noted, the RSD framework offers a way to conceptualise and support how skills can be scaffolded in a curriculum by

increasing their sophistication and rigour over time, i.e., as the student progresses through the degree. Willison (2018) explained that the RSD framework facilitates knowledge integration of content and skills, to ensure students clearly see and, therefore, meet the educational objectives at the unit, course or program level. Importantly, the RSD is a pedagogical tool designed to enrich pedagogical content knowledge so that educators have guidance as to how to teach students sophisticated thinking skills within (inter)disciplinary contexts (Willison, 2018).

As a conceptual framework, the RSD is not a set of prescriptive rules or an assessment rubric, rather it is a frame for clearly articulating assessment tasks and has been used by academics to reframe their assessment tasks and marking rubrics (Willison, 2012). The tool increases the clarity of assessment purpose and coherence of learning objectives (Willison, 2012), which is particularly important when students are working across different disciplines and may not have tacit knowledge of a discipline. The RSD allows educators to intentionally and appropriately design assessment of content and skills in a targeted, explicit manner (Willison et al., 2017).

Students and academics have reported that they recognise and acknowledge the development of their own or their students' research skills as a result of using the framework (Willison & Buisman-Pijlman, 2016). Torres (2018) explained the importance of making research skills explicit to students in teaching practice so that students become familiar with the terminology and are aware of how they are utilising their skills as they progress through their studies. Pretorius et al. (2013) stated that in working with Nursing and Midwifery, 'The RSD framework proved a valuable tool in the redesign of a second year Midwifery assignment by providing an explicit guide to build and assess student skills' (p. 383). Furthermore, the demonstrated benefit to students is the clarity of expectations in learning (Jonsson, 2014; Paterson et al., 2013; Pretorius et al., 2013; Willison, 2012). It is well known that when student cohorts are diverse, assessment rubrics and information must be further clarified, due to the absence of tacit knowledge of disciplinary styles and expectations. The flexibility and adaptability of the RSD has been reported by educators noting that they can more clearly and comprehensively embed essential research skills and sustainability specific skills into the curriculum (Willison et al., 2010).

We felt confident exploring the RSD framework to meet our challenge because of the documented rigour and success of the RSD framework in a range of learning contexts both at Monash University and at the national and international level (Pretorius et al., 2013; Taib & Holden, 2013; Torres & Jansen, 2016; Willison, 2012, 2014, 2018; Yoshida, 2015). MUL has acquired deep expertise with RSD framework across disciplines to inform the library's response to embedding research skills and processes in the curriculum. These include Law (Hughes et al., 2011), Nursing and Midwifery (Pretorius et al., 2013), Business Management (Taib & Holden, 2013), Biology (Torres, 2018) and across the Faculty of Arts (Torres & Jansen, 2016) at Monash University. This convinced us of the potential of the RSD to meet specific curriculum design and skill development objectives of the MES, including the challenge of identifying boundary-spanning skills that students needed to develop as researchers—an integral part of this course.

5.7 Learning About the RSD Framework: The Workshops

The first workshop facilitated by the library was an introduction to the RSD framework to gain academic buy-in as well as foundational understanding of the framework. The purpose was to introduce the parameters of the RSD framework (Skills Facets, Scope for Student Autonomy, Affective Domain) and demonstrate how these interact to create a tool for learning. Academics brought their assessments along to map skills and expected level of autonomy to the RSD framework. Applying the RSD in this way provided a lens through which to interpret skills in the course outline by linking academic learning skills, research skills and boundary-spanning skills required in this learning content. In doing so, MES educators began to unpack their assessment tasks and map these to the RSD framework to identify skill gaps and how independently educators expected students to be able to apply requisite skills to undertake the task and tasks in future, more advanced units. Assessment tasks were then reworked with the guidance and expertise of library research and learning skills advisers who were also present alongside academic colleagues. Educators from disparate disciplines were asked to explain what could be unclear for non-cognate students, thus putting themselves in the shoes of learners new to that discipline. At this point, cross-disciplinary challenges became obvious and collaborations were initiated to deal with these. For example, in a discussion about what 'research-mindedness' means, academics and researchers from varying disciplines realised that the term 'research' was loaded as it could be conceptualised, interpreted and described in many ways, leading a novice (such as a student) to potential confusion. Conversations with the RSD framework at the centre of the discussion helped to create meaningful dialogue about curriculum design underpinned by skill development between academics. The workshop also enhanced rapport between academic staff and library staff who were able to demonstrate their expertise and value to the curriculum. Essentially, by using the RSD framework, the library team and academic staff developed a common language with which to discuss learning and teaching within the course.

The second workshop facilitated by the library was focused on using the RSD framework to inform rubric design. This workshop focused on interrogating course assessment to ensure constructive alignment. It featured the mapping of skills students' undertaking MES required and how these skills were articulated in assessment to ensure increasing expectations of autonomy and sophistication across coursework. For example, the core units developed foundational research skills that would later be built on in second year capstone units. Educators strengthened the scaffolding of less advanced skills and knowledge in core foundation units and were then able to build on these through assessment in more advanced units. This workshop required a level of interpretation of the rubrics, sparking discussions around the language used across disciplines that were incorporated in assessment and how skills students needed to develop were described and conveyed.

The library facilitated robust pedagogical discussion on differing perspectives on teaching and learning. This manifested in starkly different perceptions regarding

the value of rubrics and even whether skills should be explicitly taught within the curriculum. Through discussion, the academic team agreed on a harmonised vision and that rubrics and the RSD framework formed a sound pedagogical approach to building assessment across units in a targeted, scaffolded and harmonised way. Assessments would be more clearly and explicitly articulated, and boundary-spanning skills made more obvious by linking them to skills underpinning research practice. Upon completion of the second workshop, awareness of the library's expertise had been demonstrated and trust was established across all participants. Moreover, deeper collaboration and harmonisation of approaches had been achieved, with flow-on positive outcomes for students.

5.8 RSD Workshop Outcomes for Informing Curriculum Design

5.8.1 Applying the RSD Framework: Revealing Skills for Interdisciplinary Study

Workshops led by the library contributed towards a positive change to teaching practice. This was particularly true for activities that allowed educators to identify and articulate the multitude of boundary-spanning sub-skills underpinning assessment and those that revealed assumed tacit knowledge. Thus, the library team facilitated the learning curve of academics to explicitly link skills required for interdisciplinary study to research rich content. The process of mapping skills from assessment tasks to the RSD Facets of Research revealed the strong interplay between affective (emotional) skills and dispositions and how they relate to cognitive skill sets, which in combination assist in articulating skills for boundary-spanning thinking (see Table 5.1).

5.8.2 Applying the RSD Framework: Revealing Unconscious Assumptions About Learner Autonomy

The RSD framework offers a learning continuum explicating progressive degrees of student autonomy in performing skills associated with the RSD framework's Facets of Research (See chapter two). Engaging with the RSD framework has helped educators make their expectations of student autonomy visible, which has provided a way to guide conversations as to whether autonomy is pitched too high or too low. Academics have been surprised that often the level required in an assessment was informed by false assumptions of skill independence or specific abilities that many learners may not have developed or been exposed to when entering into a new discipline within an interdisciplinary context. During the RSD workshops, for example, educators

Table 5.1 How the Facets of Research in the RSD framework have revealed requisite 'boundary-spanning skills' required by the Masters of the Environment and Sustainability (MES) and connect these skills to the research process

RSD Facets of Research	Affective Skills (behaviour and attitudes) underpinning boundary-spanning skills categorised to the RSD Facets of Research	Boundary-Spanning skills for MES revealed by the RSD Facets of Research	An example of MES Learning objectives informed by the Facets of Research
Embark and Clarify	Curious Entrepreneurial Adaptable Motivated Inspired Imaginative Proactive Tactical	Identify issues Identify multiple perspectives Identify multiple and diverse stakeholders Ask questions for clarification Probe, challenge Consider multiple options, flexible Plan and prepares for multiple stakeholders Tolerate uncertainty, ambiguity Strategise across systems and scales	Plan evidence-based sustainability actions across multiple sectors, systems and scales, with consideration of the perspectives, constraints and challenges of different sectoral and regional contexts
Find and Generate	Resourceful Determined Strategic Informed	Collect and records information/data from multiple disciplines and evidence bases Find appropriate information/data from a range of sources and contexts Identify digital practices and protocols Generate new knowledge from the synthesis of multiple sources and forms of evidence e.g. quantitative and qualitative Innovate, transcend known parameters using sustainability science and other interdisciplinary and transdisciplinary knowledge structuring systems Choose appropriate theoretical frameworks and methodologies	Devise vid Devise evidence-based approaches to sustainability through integrating data with multidisciplinary tools, frameworks and principles

(continued)

Table 5.1 (continued)

Evaluate and Reflect	Mindful Reflective Considered Discerning	Evaluate established ideas and concepts Co-construct criteria across multiple contexts Consider multiple viewpoints, value systems, and perspectives e.g. development and developing contexts Reflect on own and others processes using the principles of sustainability and the United Nations Sustainable Development Goals Apply a range of reasoning and ethical techniques Applies reflective practice	Evaluate and integrate the multidisciplinary scientific evidence for contemporary global change and ecosystem services
Organise and Manage	Meticulous Methodical Productive Harmonising Nimble Agile Adaptive	Manage processes, self and others Manipulate data/information for accessibility and clarity for diverse stakeholders Reframe processes as needed based upon consultation and context Collect, Classifies using global to local frameworks, fit for purpose Utilise complex systems and tools Assemble, rally together, mobilise others and manage transformation and change	Appraise, classify and prioritise complex systems, problems and solutions relevant to sustainability

Table 5.1 (continued)

Analyse and Synthesise	Creative Open-minded Rigorous Objective Innovative Wisdom	Apply lateral and critical thinking Reason Compare and contrast Assess multiple forms of evidence Examine implications, actions and consequences in alignment with sustainability principles and ethics Problem-solve, re-imagines fresh solutions recognising the interconnected and multidimensional nature of sustainability issues Combine thinking strategies, practices and tools from diverse sectors, cultures and disciplines Integrate new ideas and knowledge using sustainability frameworks and knowledge structuring systems Analytical, keeps questioning, curious, humility Forecasting, scenario planning, forward thinking	Forecast challenges associated with global change and sustainability through analysing evidence and applying scientific knowledge, concepts and methods

Table 5.1 (continued)

| Communicate and Apply | Empathetic
Ethical
Inclusive
Connected
Persuasive
Respectful
Constructive | Use appropriate language and terminology for a broad range of different stakeholders
Consider range of audiences, stakeholders and their needs, worldviews and constraints
Use multiple digital platforms and forms of communication and synthesis
Connect, shares, collaborates in/across teams
Socially and interculturally aware
Culturally respectful
Negotiation, conflict resolution
Open new perspectives
Connects local to global solutions | Effectively communicate economic, social or physical scientific knowledge across disciplines and communities of practice in environment and sustainability |

frequently stated that the RSD framework helped them see the student perspective. This has enabled educators to appreciate just how complex the assessments they were creating were.

Applying the RSD framework revealed that there were multiple tasks within a single assessment task. Through collaborative discussion and analysis, all educators found that the assessments were routinely pitched at higher levels of autonomy. As such, educators came to realise they were assuming higher degrees of tacit knowledge from students, and as students from different disciplinary backgrounds, they would struggle to perform at these higher levels of autonomy. Educators were then able to collaboratively improve their assessments, by explicitly articulating the tacit knowledge required and building in appropriate and scaffolded skill development. The library's facilitation, expertise and guidance in using the RSD framework allowed academics to understand unconscious assumptions, articulate tacit disciplinary knowledge and make expected skills and their development explicit.

5.9 Reflection on the Initiative

Often there are barriers that prevent the development of this type of partnership where working with library experts and academics of this calibre is the exception rather than the norm. However, this experience has been a highlight of both authors' careers. Therefore, a significant outcome gained for our application of the RSD framework as educators is the rich and rewarding experience of deep collaboration between academics and library staff.

The RSD was pivotal for opening a new shared path for how cross-disciplinary educators can work together in a true and unique collaborative partnership. The RSD framework has successfully met a known gap in interdisciplinary education by offering a common platform and language to overcome monodisciplinary teaching and research practices. As such the RSD has provided guidance to educators in a new interdisciplinary curriculum and provided a way to uncover and ensure that boundary-spanning skills critical for engaging in this complex context are overt and clear. As such, the sophisticated skills that a diverse student cohort requires to engage with challenging concepts and ideas are scaffolded deliberately, explicitly and incrementally across units to ensure progression. The result is a successful, well-rounded, sound, consistent and transparent course, which facilitated the success and satisfaction of the students. The RSD framework has proven highly successful and effective across the Master of Environment and Sustainability and we encourage take up of the RSD framework more broadly to overcome a range of challenges in interdisciplinary education.

References

Alkaher, I., & Goldman, D. (2018). Characterizing the motives and environmental literacy of undergraduate and graduate students who elect environmental programs—A comparison between teaching-oriented and other students. *Environmental Education Research, 24*(7), 969–999. https://doi.org/10.1080/13504622.2017.1362372

Bardecki, M., & Millward, A. (2020). Interdisciplinary cooperation and collaboration in undergraduate sustainability-based programs: A Canadian example of environment and urban sustainability (EUS). In F. Leal et al. (Eds.), *Universities as living labs for sustainable development* (pp. 399–416). Cham, Switzerland: Springer Nature.

Bednarek, A. T., Wyborn, C., Cvitanovic, C., Meyer, R., Colvin, R. M., Addison, P. F. E., et al. (2018). Boundary spanning at the science–policy interface: the practitioners' perspectives. *Sustainability Science, 13*(4), 1175–1183. https://doi.org/10.1007/s11625-018-0550-9

Boden, D., Borrego, M., & Newswander, L. K. (2011). Student socialization in interdisciplinary doctoral education. *Higher Education, 62*(6), 741–755.

Brandenburg, C., & Kelly, M. (2019). Integration as the new (general education). *Journal of Interdisciplinary Studies in Education, 8*(1), 21–29.

Brewer, G. D. (1999). The challenges of interdisciplinarity. *Policy Sciences, 32*(4), 327–337. https://doi.org/10.1023/A:1004706019826

Brown, R. R., Deletic, A., & Wong, T. H. (2015). Interdisciplinarity: How to catalyse collaboration. *Nature News, 525*(7569), 315–317. https://www.nature.com/news/interdisciplinarity-how-to-catalyse-collaboration-1.18343

Cooper, H., Carlisle, C., Gibbs, T., & Watkins, C. (2001). Developing an evidence base for interdisciplinary learning: A systematic review. *Journal of Advanced Nursing, 35*(2), 228–237. https://doi.org/10.1046/j.1365-2648.2001.01840.x

Coops, N. C., Marcus, J., Construt, I., Frank, E., Kellett, R., Mazzi, E., Munro, A., Nesbit, S., Riseman, A., Robinson, J., & Schultz, A. (2015). How an entry-level, interdisciplinary sustainability course revealed the benefits and challenges of a university-wide initiative for sustainability education. *International Journal of Sustainability in Higher Education, 16*(5), 729–747. https://doi.org/10.1108/IJSHE-04-2014-0059

Coulibaly, A. W. (2019). Overview of the international framework on education for sustainable development, UNESCO. Available via UNFCCC United Nations Climate Change COP25, Documents and Decisions. https://unfccc.int/documents/197160

de Greef, L., Post, G., Vink, C., & Wenting, L. (2017). *Designing interdisciplinary education: A practical handbook for university teachers.* Amsterdam: Amsterdam University Press.

Dinmore, I. (1997). Interdisciplinarity and integrative learning: An imperative for adult education. *Education, 117*(3), 452–468.

Ernst and Young LLP and Federation of Indian Chambers of Commerce and Industry. (2018). University of the future: Bringing education 4.0 to life October 2018. India: Ernst and Young LLTP. http://ficci.in/spdocument/23043/higher-education-ficci-Report.pdf.

Falcus, S., Cameron, C., & Halsall, J. P. (2019). Interdisciplinarity in higher education: the challenges of adaptability. In M. Snowden & J. P. Halsall (Eds.), *Mentorship, leadership, and research: Their place within the social science curriculum* (pp. 129–145). Springer. https://doi.org/10.1007/978-3-319-95447-9

Full, R. J., Dudley, R., Koehl, M. A. R., Libby, T., & Schwab, C. (2015). Interdisciplinary laboratory course facilitating knowledge integration, mutualistic teaming, and original discovery. *Integrative and Comparative Biology, 55*(5), 912–925. https://doi.org/10.1093/icb/icv095

Hughes, P., Tucker, K., & Knaggs, C. (2011). Sitting on the same bench: Complementing law learning outcomes. *Journal of Academic Language and Learning, 5*(2), A50–A59.

Irani, Z. (2018). The university of the future will be interdisciplinary. Resource document. The Guardian Australia. https://www.theguardian.com/higher-education-network/2018/jan/24/the-university-of-the-future-will-be-interdisciplinary

Jonsson, A. (2014). Rubrics as a way of providing transparency in assessment. *Assessment and Evaluation in Higher Education, 39*(7), 840–852. https://doi.org/10.1080/02602938.2013.875117

Klaassen, R. G. (2018). Interdisciplinary education: A case study. *Journal European Journal of Engineering Education, 43*(6), 842–859. https://doi.org/10.1080/03043797.2018.1442417

Lindvig, K., Lyall, C., & Meagher, L. R. (2017). Creating interdisciplinary education within monodisciplinary structures: The art of managing interstitiality. *Studies in Higher Education., 44*(2), 347–360. https://doi.org/10.1080/03075079.2017.1365358

Loveys, B. R., Kaiser, B. N., McDonald, G., Kravchuk, O., Gilliham, M., Tyerman, S., & Able, A. (2014). The development of student research skills in second year plant biology. *International Journal of Innovation in Science and Mathematics Education, 22*(3), 15–25.

Noy, S., Patrick, R., Capetola, T., & McBurnie, J. (2017). Inspiration from the classroom: A mixed method case study of interdisciplinary sustainability learning in higher education. *Australian Journal of Environmental Education, 33*(2), 97–118. https://doi.org/10.1017/aee.2017.22

Orkhon, G., & Kathleen, M. Q. (2017). Challenges of designing interdisciplinary postgraduate curricula: Case studies of interdisciplinary master's programmes at a research-intensive UK university. *Teaching in Higher Education, 22*(5), 569–586. https://doi.org/10.1080/13562517.2016.1273211

Paterson, G., Rachfall, T., & Reid, C. (2013). Building a culture of research: using undergraduate research to advance the TR profession, build research capacity and foster collaborative relationships. *Therapeutic Recreation Journal, 47*(4), 259–275.

Pretorius, L., Bailey, C., & Miley, M. (2013). Constructive alignment and the Research Skills Development framework: using theory to practically align graduate attributes, learning experiences, and assessment tasks in undergraduate midwifery. *International Journal of Teaching and Learning in Higher Education, 25*(3), 378–387.

Schon, D. A. (1991). *The reflective practitioner*. Aldershot: Ashgate.

SDSN Australia/Pacific. (2017). Getting started with the SDGs in universities: A guide for universities, higher education institutions, and the academic sector. Australia, New Zealand and Pacific Edition. Sustainable Development Solutions Network—Australia/Pacific, Melbourne.

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., Stigson, B., Shrivastava, P., Leach, M., & O'Connell, D. (2017). Integration: The key to implementing the sustainable development goals. *Sustainability Science, 12*(6), 911–919. https://doi.org/10.1007/s11625-016-0383-3

Taib, A., & Holden, J. (2013). 'Third generation' conversations—A partnership approach to embedding research and learning skills development in the first year. A practice report. *The International Journal of the First Year in Higher Education, 4*(2), 131–136. https://doi.org/10.5204/intjfyhe.v4i2.178

Tinnell, T. L., Tretter, T. R., Thornburg, W., & Ralston, P. S. (2019). Successful interdisciplinary collaboration: Supporting science teachers with a systematic, ongoing, intentional collaboration between university engineering and science teacher education faculty. *Journal of Science Teacher Education, 30*(6), 621–638. https://doi.org/10.1080/1046560X.2019.1593086

Torres, L. (2018). Research skills in the first year biology practical—Are they there? *Journal of University Learning and Teaching Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/3

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council on Undergraduate Research (CUR) Quarterly, 37*(1), 26–33. https://doi.org/10.18833/curq/37/1/9

Tripp, B., & Shortlidge, E. E. (2019). A framework to guide undergraduate education in interdisciplinary science. *CBE–Life Sciences Education, 18*(2). https://doi.org/10.1187/cbe.18-11-0226

Wals, A. E. (Ed.). (2009). *Review of contexts and structures for education for sustainable development: 2009*. UNESCO.

Wilson, A. (2010). *Knowledge power: Interdisciplinary education for a complex world*. London: Routledge.

Williams, P. (2002). The competent boundary spanner. *Public Administration (London), 80*(1), 103–124. https://doi.org/10.1111/1467-9299.00296

Willison, J. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research and Development, 31*(6), 905–919. https://doi.org/10.1080/07294360.2012.658760

Willison, J. (2014). Outcomes and uptake of explicit research skill development across degree programs (final report—Office of Learning and Teaching). https://www.voced.edu.au/content/ngv%3A64458

Willison, J. (2018). Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching and Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/1

Willison, J., & Buisman-Pijlman, F. (2016). Ph.D. prepared: Research skill development across the undergraduate years. *International Journal for Researcher Development, 7*(1), 63–83. https://doi.org/10.1108/IJRD-07-2015-0018

Willison, J. & O'Regan, K. (2006, 2018). Research Skill Development framework. Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: A framework for students becoming researchers. *Higher Education Research and Development, 26*(4), 393–409. https://doi.org/10.1080/07294360701658609

Willison, J., Lievre, K. L., & Lee, I. (2010). *Making research skill development explicit in coursework.* Australian Learning and Teaching Council. https://www.voced.edu.au/content/ngv%3A65127

Willison, J., Sabir, F., & Thomas, J. (2017). Shifting dimensions of autonomy in student's research and employment. *Higher Education Research and Development, 36*(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216

Wineburg, S., & Grossman, P. (Eds.). (2000). *Interdisciplinary curriculum: Challenges to implementation.* New York, NY: Teachers College Press.

Yoshida, A. (2015). Facilitating learning and research engagement in 4th year undergraduate students: The outcomes of student self-assessment survey. *Qualitative and Quantitative Methods in Libraries, 4*(4), 871–881.

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Chapter 6
Enabling Community: Collaborating Through Online Learning Design

Anna Findlay and Carolyn O'Dwyer

Abstract The redesign of a tertiary enabling programme at La Trobe University generated opportunities for collaboration between academics and librarians. Previously offered face to face, a shift to online delivery provided an opportunity to rethink how equity students are familiarised with the university environment, academic skills and the library. Our collaboration generated a learning community that extends the partnership described in the Library Learning and Teaching Partnership Framework. To model the benefits of a learning community, this collaborative partnership encouraged students to see library staff and resources as integral to academic success. This case study reports on the drivers and process of collaboration, known outcomes relating to resource use, student feedback, and reflects on potential for further research and resource development.

6.1   Introduction

In the Australian university setting, enabling programmes (also known as preparation, transition or pathway programmes) provide supported access to higher education for non-traditional students (Taylor et al., 2018). While a recent study provides evidence that longitudinal outcomes of these students equate to those of students entering the same course via more conventional means, a range of pedagogical strategies and approaches have evolved to meet their initial needs (Chesters et al., 2018). The students targeted by these programmes commonly identify with at least one dimension of familial, cultural, geographic, linguistic, economic or social disadvantage as defined by Australian Commonwealth funding agreements (Hodges et al., 2013). This cohort may be understood in terms of multilayered intersectional diversity, but

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also in terms of a common experience of educational disadvantage that has left them with no accepted basis for entry to university.

As university participation has broadened to include more non-traditional students, there has been a gradual shift from the deficit discourse attached to these cohorts and towards a more nuanced valuing of lived experience. Educational design and delivery approaches in enabling programmes have been extensively mapped and reported on by enabling educators at the University of Newcastle, who define an enabling pedagogy as one of 'care, empathy and optimism' (Bennett et al., 2016, p. 24), and describe the positive outcomes achieved by taking a strengths-based approach. There is a complex balance of respecting students' prior knowledge and experiences, while recognising that they are unlikely to have had access to the social and cultural practices underpinning academic success, or to have been acculturated to the encoded language and conventions of a learning environment (McKay & Devlin, 2014).

A range of social, cultural, digital and educational challenges confront enabling students. Hodges et al. (2013) identify twin dilemmas: knowing how and when to access support services (including academic skills advice and the university library); and how to be comfortable with seeking help. While many students may worry about how they are perceived when requesting support, non-traditional students may experience the act of asking for assistance as an acknowledgement of failure. Oliveira (2017) proposes that the academic library has an important role in student retention and success, and that library staff are well placed to positively influence student outcomes. If the student cohort is likely to be unfamiliar with—and anxious about—the role and value of the academic library, there are questions about what this looks like in practice. These questions become more complex when students are learning online.

Ways of addressing this were considered when academics leading the La Trobe University (La Trobe) enabling programme—the Tertiary Preparation Programme (TPP)—approached the Library Learning and Teaching team. Institutional drivers meant this programme was undergoing a complete and time-constrained course redesign. Previously a face-to-face single semester course taught at regional campuses, the new enabling programme would offer six start dates per calendar year in eight-week blocks. Between eight and ten modular micro-subjects were planned to be available in each block, or online study period. This constantly rolling course delivery model may be conceptualised as a carousel, with multiple entry and exit points. It provides a high level of flexibility (Mancini et al., 2018) to students whose study may be interrupted by complex financial, family and health circumstances (Harvey & Luckman, 2014). With a vision of how a vulnerable student cohort might be provided with intuitive and targeted support, TPP academics approached the library. A conversation began on how we could embed online library resources and digital literacies into the curriculum, and promote in-person support to students in campus libraries and co-located learning hubs.

6.2 Framework

The Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019) acknowledges the importance of partnerships and collaboration in the development of student skills for academic success. Librarians collaborate with academic staff to embed information literacy instruction which is constructively aligned with the intended learning outcomes of the subject or course, and with the graduate capabilities of 'Research and Evidence-Based Inquiry' or 'Digital Capability'. Collaboration in this context is a 'working, learning and sharing process' (Pham & Tanner, 2014, p. 3), focussed on transferral of knowledge amongst all participants.

Effective collaboration between academics and librarians has been identified as key to the development of student research skills, while research indicates that engagement with library instruction is most likely when it is linked to subjects and assessment (Pham & Tanner, 2014). By partnering with teaching academics and student learning services, librarians can further promote and coordinate academic services to students (Dewan & Steeleworthy, 2013). An embedded approach to scaffolding information literacy into subjects provides learners with purposeful engagement, allowing students to build on the foundations of their prior learning (Courtney & Wilhoite-Mathews, 2015). A further and critical point related to librarian and academic collaboration is that it gives librarians access to the online spaces where students are already present and active (Tumbleson & Burke, 2013). In this case, an online librarian presence was identified as critical for authentic student engagement with the library.

A key redesign concern of the TPP academics was the loss of the learning community that the face-to-face programme had provided. Learning isolation, lack of effective access, and a lack of awareness of how to access support (or lack of effective access to support) are frequently cited as reasons why students withdraw from enabling programmes (Willans & Seary, 2018). As a way of addressing this, a central theme emerged of reinforcing and extending the frame of the TPP community to include others that students might encounter in their learning journey. In the initial stages of the course redesign, the TPP student-facing team consisted of academics and learning skills advisors. As the development progressed, this was expanded to include librarians. TPP students might no longer have subject lecturers or tutors on regional campuses, but they could access online and face-to-face help through the library.

The process of collaboration between academics, educational designers, learning advisors, and librarians generated an inclusive learning community for these staff. As resources were developed, we became increasingly aware that we were exemplifying precisely the type of inclusive learning community that we wanted our students to experience. We decided to make this visible to students by bringing staff involved in collaborating on the development of the subject into the presentation and delivery of online subject content. Doing this mirrored the previous face-to-face learning experience where librarians and learning support staff were actively involved in student

learning. From the librarian's perspective, this allowed us to embed information literacy development, create an understanding of the library as an integral component of successful learning, and reinforce that all students are welcome and belong in library spaces.

6.3 Methods

Our collaboration involved discussion of areas where librarians could contribute to the development of research skills and digital literacies, using a constructively aligned approach linked to activities and assessments that would be meaningful for students. Together, we identified the need for selection and creation of appropriately scaffolded instructional resources to develop research skills and digital literacies, and the curation of academic resources for students' learning and reading. The academics suggested librarians present a video on digital and research concepts that would form part of subject learning content, contextualising them as part of the university learning community. Looking at the course and subject intended learning outcomes, librarians identified that this would be a level one collaboration (as defined by the LLTP Framework) requiring an embedded approach.

6.3.1 Embedding Librarian Videos in Subject Content

Librarians found this request a little unusual: 'Would librarians be prepared to present videos on some digital and research concepts for some of the subjects?' Although we frequently create instructional videos with voiceover, we had not previously been asked to present to the camera and were initially a little hesitant. However, the academic team were committed to building visible pedagogical connections to the broader university community into the course and had identified the Library as a fundamental part of this. Focus group testing of emerging curriculum resources (with TPP student volunteers) indicated that extensive use of short videos encouraged student connection with curricular content. Focus group students discussed having a sense of knowing the video presenters which gave them confidence to ask questions and get assistance via online forums and email. Many students completing the online enabling programme transition to face-to-face undergraduate programmes, and familiarity with on-campus support services and staff has the potential to actively contribute to their longitudinal retention and success. These discussions in the focus groups and the potential for ongoing engagement with students encouraged us to proceed.

The filmed presence of librarians was requested for two subjects specifically. 'Digital Literacy' introduces students to foundational concepts of digital literacies, including appropriate online behaviour, how to navigate the learning management system, and how to access IT and learning support. 'Academic Digital Literacy'
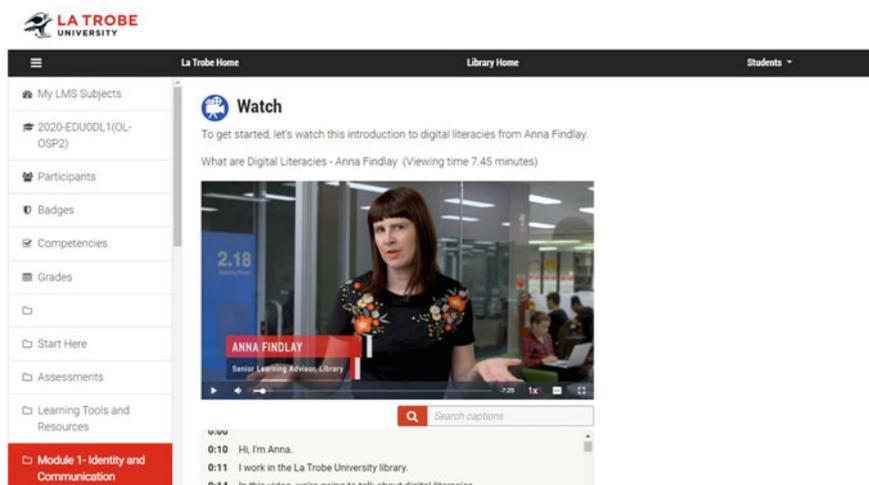
Fig. 6.1 Screenshot showing video 'What are Digital Literacies?' presented by Anna Findlay, embedded into the 'Digital Literacy' subject in the learning management system by La Trobe University used with permission

extends this digital capacity by explicitly teaching students how to use their existing skills in an academic environment. It includes an introduction to foundation concepts of research, resource curation and intellectual property. Both subjects are offered a minimum of four times a year. Although there are no mandatory TPP subjects, carousel design meant that all students would enrol in one or both subjects depending on their level of prior attainment and their point of exit from the programme. Videos presented by librarians for these subjects included the following:

- Introduction to digital literacy: what is digital literacy and what does it mean for university study? (Fig. 6.1)
- Annotated bibliography: what is it and how do I create one?
- Netiquette: how should I behave online at university?
- Searching and researching: what is the difference between searching for information on the internet, and researching in a library database?
- How can library staff and Peer Learning Advisors (PLAs) help students in their studies? What sort of questions could I ask a librarian or PLA, and how can they help? (A dialogue between a PLA and a librarian).

Working to tight timelines, script template drafts and outlines were developed, adapted and personalised by the librarians who would be presenting. Filming was conducted by an external provider, allowing a professional shoot, and edited videos with high production quality. Positive initial responses from focus groups led to library settings being used for subject videos presented by academic staff, including the entrance foyer of the Melbourne campus library, different teaching and reading rooms, and even spaces between the library stacks. Once the external filming contract

expired, further videos were created in-house with existing equipment, spaces and staff.

In planning the course architecture, TPP academics intentionally designed modular subjects constructed from original resources and units which could be repurposed as mobile learning objects in other subjects and courses. The collaborative videos became part of a suite of shared learning resources accessible to others within La Trobe via a central media repository. At the time of writing, a TPP resource register indicates university-wide uptake of specific content in other courses with similar intended learning outcomes. Examples of this reuse so far include but are not limited to the following:

- Whole modules from the subjects 'Academic Writing' and 'Digital Literacy' have been made available to undergraduate and postgraduate students in the School of Education.
- Foundational units on the topics of human body systems and introductory chemistry have been accessed by the School of Nursing and Allied Health.

The context and impact of this reuse is currently being explored as the subject of further collaborative research.

6.3.2   Assessment Help Guides

As part of our discussions on assessment support, the library provided subject guides for TPP subjects. Branded 'assessment help guides', these were created specifically for undergraduate and postgraduate subjects with 'Research and Evidence-Based Inquiry' components. Providing supplementary self-guided support, the pages on these guides are arranged to align with required components of each assessment task and include links to more general information on learning support and referencing. Students are more likely to use self-help guides if they can see a direct correlation to their studies (Courtney & Wilhoite-Mathews, 2015), so we linked our guides at the point of need in the assessment instructions. Content includes specific parts of academic skills guides, library videos, eLearning modules, relevant library resources and other quality open access resources (Fig. 6.2). With these guides we aimed to encourage assessment self-efficacy in foundation learners and familiarise them with resources they might again encounter in undergraduate study.

6.3.3   Resource Curation

As well as collaboration on videos, library support was requested for identifying and curating appropriate existing university and open-access learning resources in video and text format. Diverse resources were collated from multiple academic and general sources including library collections, online journals and popular magazines,
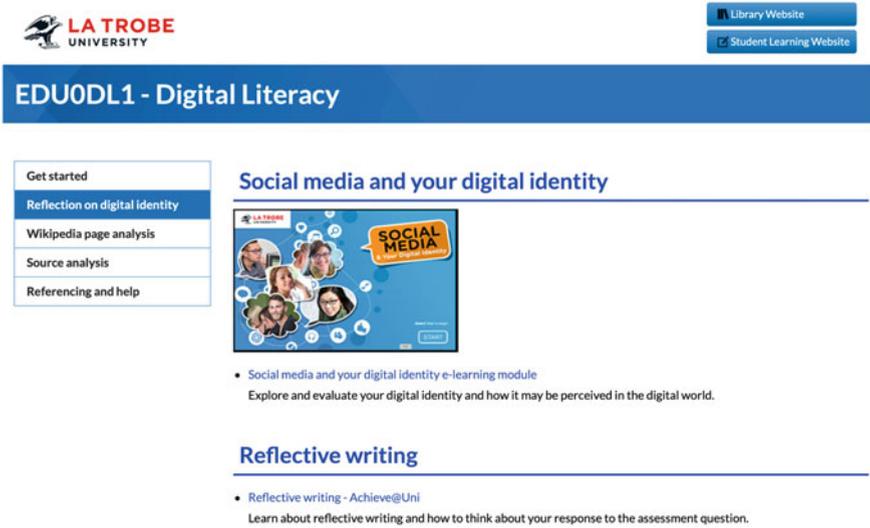
Fig. 6.2 Screenshot of the 'Digital Literacy' subject Assessment Help Guide, with embedded eLearning module and supplementary resources such as video by La Trobe University Library used with permission

websites and video streaming. Academic language and concepts were intentionally presented in accessible formats, such as research reporting from websites such as *The Conversation*, and long format investigative news articles. These resources offer a point of reading transition to students for academic research and writing. As subjects progress, students are also introduced to peer-reviewed academic journal articles and explicitly taught how to draw on these for research purposes. Existing library eLearning resources were also identified for potential inclusion or adaptation in other TPP subjects. An unanticipated value of this was an opportunity for the library team to identify opportunities for resource refreshment or further resource creation.

6.4 Reflections

6.4.1 Anna

Why are library staff presenting video content in the learning management system? By seeing the faces of a variety of La Trobe staff and former students, the academic environment becomes more familiar to students, and contributes to demystifying the language and culture of academia (McKay & Devlin, 2014). It is hard to specifically measure our personal impact on student engagement, but during Orientation 2019, I was running a library tour and a student approached me. They greeted me by name,

saying that they 'saw me in the TPP video'. They had enrolled in an undergraduate course, and on the first day on campus found a familiar face. TPP academics strongly encouraged students to visit their nearest library, and to get in touch with us if they had questions. As a result we experienced an increase in students from TPP contacting us via phone and chat with queries around referencing. Their motivation to 'do it right' has led them to question when something isn't clear in our online resources, such as the library's Academic Referencing Tool. For example, a TPP student helped us to identify and correct one of our citation examples. There were also challenges for us in this new online format—library and academic support staff at our regional campuses found themselves fielding additional inquiries from students feeling overwhelmed by online study and seeking face-to-face support for their assignments. This presents areas for further discussion around how we can better support students studying online, and how we can maintain consistency for students across all our campuses and beyond. We are also considering the impact of our assessment help guides, and how to adapt them to more interactive learning content.

6.4.2   Carolyn

The TPP course redesign process presented us with numerous challenges around quality, time frames and resourcing. Underpinning this was our concern that retention and success in enabling programmes is significantly lower than in undergraduate courses and that online enabling programmes have the lowest retention and success of all (Harvey et al., 2017). Meeting these challenges and innovating to develop a best practice model that continued to deliver improved educational and life outcomes at scale for some of the most educationally disadvantaged students in the state, meant that we had to think outside our own small team and draw on the expertise and creativity of the wider La Trobe community.

One of the key elements of our enabling approach is to always positively model the learning, communication and professional behaviours that our students may not have had access to in their previous experiences. Actively showing the value of collaboration in our subjects through the participation of the library team became a structural element in our 'invisible curriculum' and made a significant contribution to the learning of our students (Case et al., 2014). Another important element has been the demonstration of community, which familiarises isolated online students with the faces, spaces and practices of the university library environment. Qualitative student feedback on both subjects accessed through La Trobe's Student Feedback Surveys (SFS) in 2018 included comments such as 'Learning more about digital literacy was fascinating to me', 'I learnt so much about netiquette and how to properly present myself online as well as how to utilise this technology more efficiently'. Quantitative feedback drawn from the SFS data in 2018 indicated that overall student satisfaction with TPP subjects rated 4.08 out of 5 compared to a university average of 4.01.

6.5   Next Steps

The resource constraints of the TPP redevelopment provided a creative opportunity for collaboration. It drew attention to the importance of mapping the university library as a space of community and belonging—especially to equity and enabling students who are less likely to have familiarity with academic environments. It actively engaged library staff in processes of constructive alignment working with academics to take new approaches to learning activity development, embedded at the points where foundational academic knowledge and skills could be progressively scaffolded as students advanced through the subject and course. Ironically, as it demonstrated the existence of the library community to the enabling cohort, it established and developed a powerful sense of collaboration and shared intent between library staff and the enabling academics. There is continuing discussion within and between both our teams about how to leverage and extend the work done in the programme so far. Part of this discussion will involve ways of continuing to collaborate in resource development, and research to measure both immediate learning outcomes and longitudinal impact.

References

Bennett, A., Motta, S. C., Hamiton, E., Burgess, C., Relf, B., Gray, K., Leroy-Dyer, S., & Albright, J. (2016). *Enabling pedagogies: A participatory conceptual mapping of practices at the University of Newcastle, Australia.* University of Newcastle.

Case, K. A., Miller, A., Hensley, R., & Jackson, S. (2014). Careers in psychology: creating customized learning to expose the invisible curriculum. *Psychology Learning & Teaching, 13*(1), 32–37. https://doi.org/10.2304/plat.2014.13.1.32.

Chesters, J., Rutter, K., Nelson, K., & Watson, L. (2018). Alternative pathways into university: Are tertiary preparation programs a viable option? *Australian Universities' Review, 60*(1), 35–44.

Courtney, M., & Wilhoite-Mathews, S. (2015). From distance education to online learning: Practical approaches to information literacy instruction and collaborative learning in online environments. *Journal of Library Administration, 55*(4), 261–277. https://doi.org/10.1080/01930826.2015.1038924

Dewan, P., & Steeleworthy, M. (2013). Incorporating online instruction in academic libraries: Getting ahead of the curve. *Journal of Library & Information Services in Distance Learning, 7*(3), 278–296. https://doi.org/10.1080/1533290X.2013.804020

Harvey, A., & Luckman, M. (2014). Beyond demographics: Predicting student attrition within the bachelor of arts degree. *International Journal of the First Year in Higher Education, 5*(1), 19–29. https://doi.org/10.5204/intjfyhe.v5i1.187

Harvey, A., Szalkowicz, G., & Luckman, M. (2017). The re-recruitment of students who have withdrawn from Australian higer education. Report for the Australian Government Department of Education and Training. February 2017. Melbourne, Victoria: La Trobe University. Retrieved from https://www.latrobe.edu.au/__data/assets/pdf_file/0011/784028/La-Trobe-NPP-Re-recruitment-Research-Report-24-February-2017.pdf.

Hodges, B., Bedford, T., Hartley, J., Klinger, C., Murray, N., O'Rourke, J., Schofield, N. (2013). Enabling retention: processes and strategies for improving student retention in university based enabling programs: final report. Project Report. Australian Government Office for Learning and Teaching , Sydney, Australia. http://eprints.usq.edu.au/id/eprint/26824.

La Trobe University Library. (2019). Academic Referencing Tool. Retrieved from https://latrobe.libguides.com/academicreftoolgroup.

La Trobe University Library. (2019). Library Learning and Teaching Partnership Framework. Melbourne: La Trobe University. https://doi.org/10.26181/6051815fa87e4.

Mancini, M., Cipher, D., & Ganji, D. (2018). Maximizing retention and progression to graduation in online programs: a case study in 'designing with the end in mind'. In Black, R. C. (Ed.), *Critical assessment and strategies for increased student retention* (pp. 211–225). Web: IGI Global. https://doi.org/10.4018/978-1-5225-2998-9.ch013

McKay, J., & Devlin, M. (2014). 'Uni has a different language … to the real world': Demystifying academic culture and discourse for students from low socioeconomic backgrounds. *Higher Education Research & Development, 33*(5), 949–961. https://doi.org/10.1080/07294360.2014.890570

Oliveira, S. M. (2017). The academic library's role in student retention: A review of the literature. *Library Review, 66*(4/5), 310–329. https://doi.org/10.1108/LR-12-2016-0102

Pham, H. T., & Tanner, K. (2014). Collaboration between academics and librarians: A literature review and framework for analysis. *Library Review, 63*(1/2), 15–45. https://doi.org/10.1108/LR-06-2013-0064

Taylor, J. A., van Eyk, T., & Syme, S. (2018). Enabling success at university: The impact of an Australian programme to provide access to university. *Journal of Further and Higher Education, 44*(1), 69–82. https://doi.org/10.1080/0309877X.2018.1504011

Tumbleson, B. E., & Burke, J. J. (2013). *Embedding librarianship in learning management systems: A how-to-do-it manual for librarians*. Neal-Schuman.

Willans, J., & Seary, K. (2018). Why did we lose them and what could we have done? *Student Success, 9*(1), 47–60. https://doi.org/10.5204/ssj.v9i1.432

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Chapter 7
Riding on the RSD: A Library–Faculty Partnership in a Cross-Cultural Context

Thaatchaayini Kananatu, Namita Santra, and Esmael Yahya

Abstract We describe a successful library–faculty collaboration at Monash University Malaysia which saw the implementation of the research skill development (RSD) framework in a Masters of International Business Law unit, 'International Trade Law'. In identifying a disconnect between the pedagogical frameworks available to guide academics in Business Law, and the skills that students require to cultivate 'research mindednesses' for this unit, the teaching partnership looked to the RSD framework to meet this gap. In an exemplary library–faculty collaboration that has since served as a model for RSD adoption across the University, the team has successfully applied the RSD framework to design a curriculum that explicitly articulates and embeds students' research skills in assignments and corresponding marking rubrics. We trace the development of our approach and share the benefits that collaboration underpinned by the RSD has brought to our partnership that remains strong today.

7.1 Setting the Stage

The first introduction to the research skills development (RSD) framework (Willison, 2012; Willison & O'Regan, 2007) in the Malaysian context was at an introductory workshop in 2016 delivered by our Library colleagues from the Australian campus. The workshop introduced the RSD framework as a non-prescriptive, conceptual framework that provided a structure through which educators could teach research skills to university students. This appealed to us as a way to develop the legal research skills of business students in International Trade Law, a core subject in the

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Master of International Business (MIB) at the School of Business, Monash University Malaysia. The RSD framework was found to be flexible enough to inform the assessment design and marking criteria of the law assignment which all students were required to complete as a part of this course. However, as our students were not law students but business students, there was a need to align the law-based assessment to the learning outcomes that were focused on students' future professional roles in a corporate setting. The relevant course learning outcome states that graduates will 'be critical and creative scholars who apply research skills to business challenges'. The unit learning outcomes indicate that students should also be able to 'identify and understand legal issues, apply the relevant laws, and write a coherent piece of advice discussing the legal implications arising in an international trade dispute'.

One of the key aims in a Masters-level or postgraduate-level unit is to enhance research skills—in particular, to enhance research-based thinking and to teach students the processes involved in research. We had a critical need to focus on the MIB program at a whole-of-program level, in order to facilitate the skill development of students undertaking the Research Pathway option and/or those intending to undertake future higher degrees by research. The following literature points to the value of cultivating a research culture in undergraduate (Paterson et al., 2013; Willison & Buisman-Pijlman, 2016) and Masters curricula (Venning & Buisman-Pijlman, 2013), and the objective in using the RSD framework was to develop 'research-mindedness' in the postgraduates who undertook the MIB program. However, it was recognised that research skills were lacking in the unit 'International Trade Law', as the previous focus of the unit was on legal problematising, i.e. assessments that were 'problem-based' (identifying the problem and the law) rather than 'research-based' (analysing the issue and finding a solution through research).

The problem-based teaching approach required the utility of a legal reasoning method commonly known as the 'Issue Rule Application Conclusion' or IRAC method of analysis (Burton, 2017; Turner, 2012). The IRAC method was designed for law students in order to teach legal reasoning skills and train the students to 'think like a lawyer' (Burton, 2017). This paper postulates that the IRAC method is not suitable for non-law students, who are not aiming to be legally trained. Therefore, there is a tension between the two approaches; problem-based learning and research-based learning.

The current literature on legal education for non-law students, in particular business students, is focused on three approaches to legal education in business: studies that advocate using either a 'problem-based learning' approach (Batty, 2013; Douglas, 2012); an 'environmentalist' or contextual approach, i.e. how the law relates to business (Dove & Bryant, 2016; Endeshaw, 2002); or utilising interdisciplinary theoretical frameworks to make sense of the 'law' in social sciences and economics (Arup, 2013; Jones, 1989). The current literature shows gaps in terms of incorporating a research framework in the teaching and assessment of law subjects for non-law students. Braye et al. (2006) advocate a research-informed organisation of the teaching and learning of law for non-law students through the curriculum and assessment tasks that involve student-led research, but does not indicate the methodology or framework to be used. The literature is focused on teaching law to non-law

undergraduate students, which points to a significant gap in studies done on teaching law to non-law *postgraduate* students, which requires a higher standard of research-informed curriculum and assessment. This chapter elaborates on the collaborative efforts made between the library research and learning team and the academic lead, in the use of the RSD framework for legal education of non-law students.

The purpose of the collaboration with the library was to focus on integrating research skill development into assignments and marking rubric criteria, with the intention of constructing assignment tasks and marking rubrics that align with the RSD framework. The library's research and learning team, consisting of librarians and learning skills advisers who had considerable exposure to the framework (having used it to develop research skills in library programs), collaborated extensively with the lead academic throughout the redesign of the unit. The library's expertise, not only with the framework but also with the development of research skills per se, facilitated the redesign of the assessment, the construction of the marking rubric and started the discussion on the learning outcomes of the unit. The collaboration was taken further after 2017 when the Library invited Dr. John Willison (the author of the RSD framework) from the University of Adelaide, to deliver a masterclass on the RSD framework at Monash Malaysia. The masterclass introduced us to a deconstructed version of the RSD that resonated with the team currently collaborating to redesign the assessment informed by the RSD framework. This peaked collaborative interest in utilising the RSD framework, as we could see how it could be used for curriculum design as well as for creating assessment marking rubrics.

Thus, this chapter traces the development of how the research skill development (RSD) framework was used in the construction of marking rubrics in semester assignments in the MIB's unit 'International Trade Law'.

7.2   The Partnership

In designing the postgraduate course 'International Trade Law', it became evident that there were three significant learning outcomes that align with the RSD framework: first, to be able to identify legal issues and laws in an international trade context *(Embark and Clarify)*; second, to be able to apply the laws relating to international trade in a variety of practical situations *(Evaluate and Reflect)*; and third, to be able to write a coherent piece of advice discussing the legal implications of the issues arising in an international trade dispute *(Communicate and Apply).* The unit comprises two in-semester formative assessments: individual presentations and an assignment. The assignment which accounted for a quarter of the total grade tests the students on their ability to identify the legal issues that arise in an international trade context, to determine the relevant laws and scholarly work relating to those legal issues, and to be able to give coherent advice on the legal implications. The assignment requires the students to embark on a research process that includes conducting legal research, i.e. finding the law, legal materials and legal resources; analysing the legal data obtained; and putting the analysis into context (i.e. how it solves the legal problem at hand).

Table 7.1 RSD facets in relation to IRAC method

RSD facet	IRAC method
Embark and clarify	Identify the relevant legal issue
Find and generate	Identify the relevant rule/law
Evaluate and reflect	Apply the relevant rule/law to the legal issues
Analyse and synthesise	Conclude with the final answer
Organise and manage	Structure the answer according to the IRAC method
Communicate and apply	Correct legal citation and referencing

Attempts were made to incorporate the RSD framework facets into this process, and what was eventually developed utilised the RSD framework facets as well as a combination of the IRAC method and social science-type essay-writing criteria (Table 7.1).

For instance, *Embark and Clarify* was used to measure the student's ability to identify the legal issues; *Find and Generate* was utilised to ascertain the student's research in finding the relevant 'Rule'; *Evaluate and Reflect* was used to determine the student's ability to 'Apply' the rules or laws found to the legal issues identified; and *Analyse and Synthesise* provided a way to ascertain the student's 'Conclusion' or final answer to the question. As the assignment also requires good structure and writing skills, *Organise and Manage* and *Communicate and Apply* were used to measure students' ability to structure their answers linking their arguments, show clarity of thought and use the correct citation and referencing.

By using the RSD framework in combination with the IRAC method, we were not only able to teach the postgraduate business students how to conduct legal research but also encouraged them to use the skills learnt in this unit for other subjects that required research. This ensured greater transferability of skills. In comparing the results of two cohorts from that year, the students who undertook the course after we had introduced the RSD framework scored better, with more students obtaining credit or distinction. Using the RSD framework to create a criterion-referenced assessment rubric also enabled us to align the assessment question to the rubric. As a result, the students were able to answer the assessment question more effectively.

7.2.1 The Faculty–Library Partnership in Action

Driven by the interest created by the library in this unit, two committees were established to promote the rollout of the RSD framework across courses at the Malaysian campus. While one dealt with the groundwork needed in relation to the dissemination and adoption of the RSD framework, the other acted as a Steering Committee and came up with campus-wide initiatives related to the RSD. At the initial stages, the direction was to create relationships with faculty and to find 'champions' to model

the adoption of the RSD framework as a tool for improved teaching and learning. The lead academic of the course described here was the first amongst the champions and expressed her interest in collaborating with the library and successfully developed RSD-informed marking rubrics for this unit. However, the collaboration between the library and the business course did not stop there. While the assessment rubric made research skills explicit and allowed the students to consciously work through the facet expressed in the rubric, the library was key to helping students develop the skills stated in the RSD framework through workshops embedded in the course.

With the assessment rubric set in place, the faculty and the library came together for further collaboration. Over the course of the following year, the library designed a series of RSD-informed workshops to develop the range of skills required for the unit 'International Trade Law'. We ran workshops on advanced literature searching to develop search skills for the business law assignment; on citing and referencing to address the AGLC (Australian Guide to Legal Citation) referencing style (which the students had never been exposed to before); and a workshop on academic writing and presentation skills to provide guidance on both style and formatting and presenting law to a business audience.

Each workshop began with learning objectives based on the RSD facets that articulated to the students what skills they were being asked to demonstrate and where they were up to in the research process. For example, workshops 3 and 4 (Table 7.2) both developed skills under *Communicate and Apply*. The learning objectives clearly emphasised the ability to, 'Structure and link your legal arguments coherently' and 'Present your arguments following legal conventions'. The impact of talking about skills explicitly in this way was immediately evident (based on the conversations and the feedback collected after each workshop). The main takeaway for us was that being explicit about skill development made students aware of the skills they were expected to demonstrate, and that awareness led to better outcomes.

One way we ensured that skill development was made explicit was by using the language of the RSD framework to signpost the skills we were developing throughout the workshops. One way we did this was by using the guiding questions which accompany each of the facets as prompts for reflection. In this way, for instance, students were asked, 'What is your purpose?' echoing *Embark and Clarify* which

Table 7.2 RSD facet addressed in relation to library workshops

Library workshops	RSD facet
Citing and referencing (AGLC3)	Embark and Clarify Evaluate and Reflect
Advanced literature searching	Find and Generate Evaluate and Reflect
Academic writing	Embark and Clarify Organise and Manage Analyse and Synthesize Communicate and Apply
Presentation skills	*Communicate and Apply*

prompted them to stop and 'clarify and consider ethical, cultural, social and team (ECST) issues' as outlined in the framework. Signposting in this way created a metacognitive awareness that facilitated the vocabulary becoming part of our teaching and as such the students' vernacular (Torres, 2018). As Willison (2018) notes, making research skills explicit helps learners develop skills slowly over time. Asking students to regularly reflect on the facets of the RSD framework and to think about what stage of the process of research they were engaging with creates learners, we believe, who demonstrate greater 'research-mindedness' and ultimately, greater student autonomy.

This partnership also has ultimately led to other collaborations with other colleagues from the School of Business due to the success of this partnership and word of mouth.

7.3 Concluding Remarks: Moving Forward

This chapter is an account of our experience embedding the RSD framework in a postgraduate program in an international setting. What we discovered was that the RSD framework lends itself to law-based assignments, because it aligns well with standard legal methods of analysis and criteria for legal essay writing. Our experience supports the claim by Willison (2018) in the special edition of the *Journal of University Teaching and Learning Practice* that, 'The RSD is a conceptual framework…designed for educator engagement that enriches their pedagogical content knowledge so that they know how to teach students sophisticated thinking skills within (inter)disciplinary contexts' (p. 1).

The collaborative partnership which began in 2016 has been successful for the library, creating an awareness amongst faculty academics of the expertise library research and learning specialists bring to the curriculum. By working with academics to embed research skills in course content, the library teams have become valuable partners in education. The Malaysian context demonstrates that the framework can have broad application across cultural contexts and disciplinary boundaries.

References

Arup, C. (2013). Business law: The sometime subject of socio-legal studies. *Law in Context, 29*(2), 10–23.

Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). *Australian and New Zealand Information Literacy Framework: principles, standards and practice* (2nd ed.). A. Bundy (Ed.). Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf.

Batty, R. (2013). Well there's your problem—the case for using PBL to teach law to business students. *The Law Teacher, 47*(2), 243–260.

Braye, S., Preston-Shoot, M., & Johns, R. (2006). Lost in translation? Teaching law to non-lawyers: Reviewing the evidence from social work. *The Law Teacher, 40*(2), 131–150. https://doi.org/10.1080/03069400.2006.9993203.

Burton, K. (2017). 'Think like a lawyer' using a legal reasoning grid and criterion-referenced assessment rubric on IRAC (Issue, Rule, Application, Conclusion). *Journal of Learning Design, 10*(2), 57–68. https://doi.org/10.5204/jld.v10i2.229.

Douglas, S. (2012). Student engagement, problem based learning and teaching law to business students. *E-Journal of Business Education and Scholarship of Teaching, 6*(1), 33–47.

Dove, L., & Bryant, N. (2016). Law in translation: Challenges and opportunities in teaching international students in business law and legal environment courses. *Journal of Legal Studies Education, 33*(2), 263–291. https://doi.org/10.1111/jlse.12048.

Endeshaw, A. (2002). Teaching law to business students: An inquiry into curriculum and methodology. *The Law Teacher, 36*(1), 24–43. https://doi.org/10.1080/03069400.2002.9993095.

Jones, M. (1989). A primer on teaching international business law to undergraduate students. *Journal of Legal Studies Education, 8*(1–2), 37–51. https://doi.org/10.1111/j.1744-1722.1989.tb00191.x.

Larkin, J. E., & Pines, H. A. (2005). Developing information literacy and research skills in introductory psychology: A case study. *Journal of Academic Librarianship, 31*(1), 40–45. https://doi.org/10.1016/j.acalib.2004.09.008.

Paterson, G., Rachfall, T., & Reid, C. (2013). Building a culture of research: Using undergraduate research to advance the TR profession, build research capacity, and foster collaborative relationships. *Therapeutic Recreation Journal, 47*(4), 259–275.

Turner, T. (2012). Finding consensus in legal writing discourse regarding organizational structure: A review and analysis of the use of IRAC and its progenies. *Legal Communication & Rhetoric: JALWD, 9*, 351–364.

Venning, J., & Buisman-Pijlman, F. (2013). Integrating assessment matrices in feedback loops to promote research skill development in postgraduate research projects. *Assessment & Evaluation in Higher Education, 38*(5), 567–579. https://doi.org/10.1080/02602938.2012.661842.

Willison, J. W. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research and Development, 31*(6), 905–919. https://doi.org/10.1080/07294360.2012.658760.

Willison, J. W. (2018). Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching & Learning Practice, 15*(4), 2–14.

Willison, J., & Buisman-Pijlman, F. (2016). PhD prepared: Research skill development across the undergraduate years. *International Journal for Researcher Development, 7*(1), 63–83. https://doi.org/10.1108/IJRD-07-2015-0018.

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: A framework for students becoming researchers. *Higher Education Research & Development, 26*(4), 393–409. https://doi.org/10.1080/07294360701658609.

Torres, L. (2018). Research skills in the first year biology practical – Are they there? *Journal of University Teaching and Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/3.

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Part III
Case Studies Theme 2—Facilitating Curriculum Design Conversations

Chapter 8
Talking About Torts: Building Skills in Law Students

Katherine Brabon, Kay Tucker, Rheny Pulungan, and Katherine Lang

Abstract Conversations with academics are critical for the successful placement, design and improvement of our skills teaching programs in the Monash Faculty of Law. Using the example of the 'Torts' unit, we illustrate how we draw on the Research Skill Development (RSD) framework in conjunction with Law learning outcomes and graduate competencies to design a class embedded into Week 2 of the unit. The class was successful in meeting our aims of improving student skills in self-reflection, research and writing, as evidenced through case note assignments.

8.1 Introduction

Academic law librarians have a long tradition of working closely with law lecturers to embed skills. Our common goal is to ensure that law students understand and acquire the research and writing skills needed for success in law school and, afterwards, as lawyers. Monash law librarians and learning skills advisers enjoy a collegial relationship with the Law Faculty, helping us to initiate and contribute to conversations about legal education. We teach into undergraduate and postgraduate levels, in coursework and research degrees. In the undergraduate program we work with students in their first and second semesters, again in their third year, and finally in a research project unit in the final year. Our aim is to scaffold the necessary skills throughout the program, drawing on the Research Skill Development (RSD) framework (Willison & O'Regan, 2006, 2018) and Law graduate outcomes. However, there are gaps in

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skills teaching within the curriculum that we would like to fill; and conversations, both formal and informal, help to identify and address these gaps. In this chapter, we use the example of talking with 'Torts' unit lecturers to address a perceived skills gap related to case note assignments.

Conversations concerning the curriculum take place anywhere—on the stairs, at faculty events, and more formally, in committees. Over the last few years, faculty educational designers have also entered the conversation, bringing another valuable link to the units and courses we focus on. To prepare for and bring authority to these conversations, we use relevant skills frameworks and learning outcomes. The RSD framework has been useful to guide our team's thinking and planning, however it needs to be considered in terms of frameworks and guidelines more specific to the discipline of law (Hughes et al., 2011). The frameworks that consider graduate outcomes for law students are outlined in the Threshold Learning Outcomes (TLOs; Australian Learning and Teaching Council, 2010) and, more specific to research skills, in the Legal Research Competencies for New Law Graduates (Australian Law Librarians' Association, 2019). Conversations are an important mechanism to align our understanding and design of skills teaching with faculty unit learning outcomes and assessments, as well as requirements of the workplace.

Our key aim is to improve the research and writing skills of law students in both undergraduate and postgraduate courses. As educators we want to align skill development with unit learning objectives and marking rubrics to enable students to more effectively complete unit assessments. In the longer term, students need to also meet graduate outcomes and be work ready. The undergraduate law degree at Monash is the LL.B (Hons) where students graduate at Australian Qualifications Framework (AQF) level 8 (Australian Government Department of Education and Training, 2013), although the earlier core units are classified as AQF level 7. Similarly, while Juris Doctor (JD) students graduate at AQF9, earlier units may commence at levels 7 or 8. While JD students are postgraduate, they do not have an undergraduate law qualification, meaning that the more specific legal research and writing skills taught earlier on are very similar to those taught to the undergraduates. The requirements outlined in the AQF levels align with the scaffolding used in the RSD facets, which helps us with our teaching design. For both cohorts, the case note assignment (described in more detail in 8.4.1.2 Research Skills) necessitates new skills in research and writing style. In this chapter, we reflect on how the frameworks, used in conjunction with curriculum conversations, inform our skills teaching and student learning.

8.2   Linking Relevant Frameworks

We look to two main frameworks to help us embed skills in curricula. The TLOs are integral to the development of skills for law students and hence to the design of the curriculum. They outline the skills, competencies and knowledge that graduates of a Bachelor of Laws (Australian Learning and Teaching Council, 2010) or Juris Doctor (Council of Australian Law Deans, 2012) should be able to demonstrate. Of the six

TLOs, four tie in closely with the teaching and learning goals of the Law Library team. These are Thinking skills (TLO3), Research skills (TLO4), Communication skills (TLO5) and Self-management (TLO6), all of which are embedded into units throughout the curriculum. An important first step in planning our teaching is to consider which TLOs are being addressed and how we can introduce scaffolding to expand their relevance using the RSD. The TLOs are apparent in the RSD facets and can be contextualised for the discipline of law (see Table 8.1). A former member of our team published a thorough analysis of critical thinking skills in the law context, concluding that, although thinking skills are evident in the RSD framework, it does not go far enough to address the specific type of critical thinking required by law students (Hughes, 2011). Hughes went on to thoroughly explore the type of critical thinking skills required by law students, and this work is a useful extension of the RSD as a conceptual framework. We can more clearly match the place of research skills, communication skills and self-management in the various RSD facets. The value of the RSD framework is that it adds a layer by introducing a learning continuum; moving learners from *Prescribed Research*, through *Bounded*, *Scaffolded*, *Open-ended*, and finally to *Unbounded Research*. Linking the RSD framework and the TLOs in this way helps in our conversations with unit lecturers to better address both the general and the more specific needs of the unit in terms of students' skill development.

While there has been discussion around the implementation and use of the RSD framework in teaching research and writing skills generally, there have only been a few articles published on the application of the RSD framework to the teaching of research skills in legal education. As outlined in our case study, utilising additional educational frameworks alongside the RSD, primarily the TLOs, enables a more in-depth and thorough analysis of the skills needed to study and succeed in law (Hughes et al., 2011). Our educational design conversations with Law Faculty academics demonstrate the importance of adopting strategic approaches to implementing these skills as well as showing the benefits of engaging in a systematic pedagogical conversation between academics, learning skills advisers and librarians (Taib & Holden, 2013). These conversations allow a deeper deconstruction of assessment tasks and provide us with the opportunity to scaffold learning outcomes to maximise skills development opportunities (Taib & Holden, 2013). The RSD framework allows this scaffolding for skill development and is flexible enough to be incorporated into a variety of disciplinary practices, including the prevalent problem-based teaching approach often utilised in undergraduate law units (Kananatu, 2017).

In considering the RSD framework in relation to our teaching, we take into account the discipline-specific knowledge that students need in laμw. The law assignment types are new to students and differ from more traditional assignments such as essays. They include the following: case notes, legal memoranda to clients and colleagues, written and oral submissions, legal problem solving, court reports and policy memoranda. As such, there are law-specific requirements to the learning continuum outlined in the RSD framework. For example, a student may have the skills to undertake *Bounded Research* in Arts, but the skills required for *Bounded Research* in Law may require placing in context specific to legal problem solving

Table 8.1 TLO and ALLA competencies mapped to the RSD framework's Facets of Research and *Bounded* scope for student autonomy

RSD framework		Competency frameworks	
RSD Facets of Research	**Scope for student autonomy** **Bounded research** Boundaries set by and limited directions from educator channel researching in which…	**TLO and ALLA competencies**	
Embark & Clarify *What is our purpose?* Students respond to or initiate direction, clarify and consider ethical, cultural, social and team (ECST) issues	Students respond to questions/tasks with limited options. Choose from several provided structures to clarify questions, requirements, terms, expectations and ethical, cultural, social and team issues	**TLO 3** Thinking skills **TLO 4** Research skills **TLO 6** Self-management	**Identify and articulate legal issues.** *Examine a text and/or a scenario (for example, a set of facts, a legal document, a legal narrative, a statute, a case report, or a law reform report), find the key issues (for example, unresolved disputes, ambiguities, or uncertainties), and articulate those issues clearly as a necessary precursor to analysing and generating appropriate responses to the issues* **Identify factual, legal and policy issues.** *Recognise both relevant and irrelevant issues, and provide reasons for that distinction* **Reflect on and assess own capabilities and performance.** *Reflect critically on the extent of learning* **Make use of feedback as appropriate.** *Be receptive to, and make use of, constructive feedback (both positive and critical) to improve performance*

Table 8.1 (continued)

RSD framework		Competency frameworks	
		ALLA 4 Plan and conduct research	*4.1. Determine which jurisdiction(s) apply* *4.2. Determine whether primary and/or secondary sources are needed* *4.3.Determine main legal concepts for the legal issue being researched*
Find & Generate *What do we need?* Students find information and generate data/ideas using appropriate methodology	Students collect and record appropriate information/data using given methodology from predetermined source/s where information/data is not obvious	**TLO 4** Research skills	**Use intellectual and practical skills to select and use appropriate information sources, and determine their authority.** *Identify the need for research, select and use appropriate information sources, and determine their authority. These skills also include the ability to read, comprehend, and paraphrase a range of legal and non-legal documents; as well as legal referencing skills; an understanding of the requirements of academic integrity; and the ability to manage, organise, and retrieve information effectively* **Research factual, legal and policy issues.** *Research skills include the ability to find and use (up-to-date) primary and secondary legal sources in order to locate relevant material. Graduates also need to be able to identify and retrieve appropriate sources of non-legal information to support subsequent evaluation and synthesis of relevant factual and policy issues*

Table 8.1 (continued)

RSD framework		Competency frameworks
		ALLA 1 Legislation **ALLA 2** Case law **ALLA 3** Commentary **ALLA 4** Plan and conduct research	*1.7. Find legislation judicially considered* *2.2. Know how to use a citator or noting up service for a case* *2.3. Find cases by party names, citation or subject* *2.4. Find the most authoritative version of a case* *2.5. Find the litigation history and judicial consideration of a case* *3.1. Find commentary on a particular subject, piece of legislation or a case in secondary sources, including encyclopaedias, subject-specific commentaries, and journals* *4.4. Construct a search using keywords and applying search operators* *4.6. Know how to decipher a legal abbreviation*
Evaluate & Reflect What do we trust? Students determine the credibility of sources, information, data and ideas, and make their own research processes visible	Students evaluate sources/information/data using a choice of provided criteria to specify credibility and to reflect on and improve processes used	**TLO 3** Thinking skills **TLO 4** Research skills	**Engage in critical analysis and make a reasoned choice amongst alternatives.** *This involves examining a text, claim or argument and identifying the hidden structures; for example, legal and non-legal issues; premises and hypothesis; factual, theoretical and ideological assumptions; undisclosed biases and prejudices; and so on* **Evaluate factual, legal and policy issues.** *Appraise carefully and assess the value of the factual, legal and policy material that is retrieved from the research activity*

(continued)

Table 8.1 (continued)

RSD framework		Competency frameworks
		ALLA 2 Case law **ALLA 4** Plan and conduct research	*2.1. Know the possible versions of a case and its reporting hierarchy: reported in an authorised law report series, reported in an unauthorised law report series and unreported judgments* *4.5. Critically evaluate resources and results for currency, relevance and authority*
Organise & Manage *How do we arrange?* Students organise information & data to reveal patterns/themes, managing teams and processes	Students organise information/data using a choice of given structures. Manage a process which has alternative possible pathways (and specify team roles)	**TLO 4** Research skills	**Select and use appropriate information sources, and determine their authority.** *These skills include the ability to read, comprehend, and paraphrase a range of legal and non-legal documents; as well as legal referencing skills; an understanding of the requirements of academic integrity; and the ability to manage, organise, and retrieve information effectively*
		ALLA 4 Plan and conduct research	*4.7. Know how to cite according to the Australian Guide to Legal Citation*

Table 8.1 (continued)

RSD framework		Competency frameworks
Analyse & Synthesise *What does it mean?* Students analyse information/data critically and synthesise new knowledge to produce coherent individual/team understandings	Students analyse trends or themes in several sources of information/data and synthesise to integrate knowledge into provided standard formats. *Ask emergent, relevant and researchable questions.* *	**TLO 3** Thinking skills **TLO 4** Research skills **Apply legal reasoning and research to generate appropriate responses to legal issues.** *This is identifying the legal rules and processes of relevance to a particular legal issue and applying those rules and processes in order to reach a reasonable conclusion about, or to generate an appropriate response to the issue* **Engage in critical analysis and make a reasoned choice amongst alternatives.** *This involves examining a text, claim or argument and identifying the hidden structures: for example, legal and non-legal issues; premises and hypothesis; factual, theoretical and ideological assumptions; undisclosed biases and prejudices; and so on* **Think creatively in approaching legal issues and generating appropriate responses.** *Diagnose the specific requirements of a particular legal issue on its facts and determine the most appropriate response from the spectrum of available responses. It requires a capacity to think laterally and engage in transferable problem-solving* **Synthesise factual, legal and policy issues.** *Recognise and isolate the key relevant elements or components of an issue from a range of sources, and link or collate them in a logical way, in order to develop a more detailed and complex understanding and treatment of those issues*

(continued)

Table 8.1 (continued)

RSD framework		Competency frameworks
Communicate & Apply *How do we relate?* Students apply their understanding and discuss, listen, write, perform, respond to feedback and present processes, knowledge and implications of research, heeding ethical, cultural, social and team (ECST) issues and audience needs	Students use some discipline-specific language and genre to relate their prior and newly developed knowledge to tasks and then to a specified audience. Apply the knowledge developed to several similar contexts and stay within boundaries set for ethical, cultural, social and team issues	TLO 5 Communication and collaboration **Communicate in ways that are effective, appropriate and persuasive for legal and non-legal audiences** *This includes a knowledge and ability to work in plain English, as well as the use of legal, specialist terms where appropriate, in both traditional forms of communication (such as letters, briefs, questioning, and oral presentations) and contemporary forms of communication (such as email, video-link, and interactive online communications)* **Collaborate effectively.** *This encompasses teamwork, working in groups, and working cooperatively with others*
		ALLA 4 Plan and conduct research **4.7.** *Know how to cite according to the Australian Guide to Legal Citation*

methods such as the IRAC (Issue, Rule, Application, Conclusion) method (Burton, 2017).

8.3 From Informal Conversations to Structured Learning

During our consultations with first year students, we often observe that students have difficulty conducting independent research, which includes applying critical and analytical thinking to clearly communicate research findings in their assignments. These observations are verified through feedback from lecturers. The case note assignment, a common law assessment, is a requirement for first year students taking 'Torts'. This assignment requires students to analyse, research and discuss a specific court case and its associated legal issues. To address the skills deficit shown by students and better meet unit learning outcomes, greater collaboration between the lecturers and the Law Library team was needed. In this way, a conversation emerged.

The library has a long history of collaborating closely with the Law Faculty on curriculum design that incorporates research and writing skills. Innovations have varied from short discrete units consisting of skills, ethics, and research modules, to a full semester compulsory unit in first year called 'Research and Writing', to our current model of embedded classes and eLearning modules in selected substantive law units. Our conversations with the faculty have been instrumental in leading to a more scaffolded approach of embedded skill development. By providing a structured and incremental approach to developing students' skills, the RSD framework clarifies what an embedded and scaffolded approach to learning looks like. We could easily see the logical step in moving students from the research and writing we had taught them in their first semester to the next stage, using 'Torts' as the host unit, especially as the unit's learning outcomes can be mapped to the RSD framework. The learning outcomes cover the following: researching, interpreting and synthesising; formulating reasoned and appropriate responses; communicating effectively and persuasively; learning and working autonomously; and using feedback to improve students' own capabilities and performance.

Having identified a clear need to enhance skill development within 'Torts', we first considered the place of the unit within the course as a whole and the skills teaching carried out so far, that is, we scaffolded the skill development. We then used the RSD facets and learner autonomy to design the class in the context of the 'Torts' unit, and we examine this more closely in the next section. The majority of undergraduate law students undertake 'Torts' in the second semester of their law degree. In Semester 1, we teach students research and writing skills in a first compulsory unit, 'Foundations of Law', applying *Prescribed Research* as the degree of learner autonomy in the RSD framework. At the same time, these students take 'Criminal Law', and it is there that they are first exposed to the 'case note' assignment type, where they move along the learning continuum to *Bounded Research*. This is complicated by a small number of students who study 'straight' law (only law subjects with no concurrent non-law degree) who undertake both 'Foundations of Law' and 'Torts' in their first semester,

and are therefore more likely to be situated earlier in the learning continuum at *Prescribed Research*. This means that we need to be flexible in the way we progress along the RSD continuum when teaching.

An added impetus in using the undergraduate 'Torts' unit as the host for skills scaffolding came from some prior success we had experienced in the postgraduate Juris Doctor unit. There are key differences between the undergraduate and postgraduate cohorts in terms of class sizes and lecturer teaching style, however the skill development needs are very similar. The initial conversation between the chief examiner (CE) and the law learning skills adviser resulted in joint work to develop clearer expectations for the assignment and to build skills based on student experiences from an earlier case note assignment in the JD first trimester unit. The marking rubric was also redesigned to more explicitly incorporate skill development. An underlying issue was related to student confidence and their authority to interpret assignment instructions independently without relying on clarifications from the lecturer. Students were encouraged by the lecturer to attend a seminar run by the learning skills adviser, stressing its relevance, as below:

> The aims of the seminar are to help you develop appropriate skills and get better marks. It will build on your experience of writing a case note in your first semester and help you to identify ways to use feedback from that assignment to improve your performance in this one. It will also show you how to make proper decisions about the scope of the task and whether you are interpreting it in a defensible way.

The outcomes at the end of the JD unit indicated a link between improved grades and participation in the library's skills development seminar, and was a positive experience for the lecturers. The approach elevated and reinforced the importance of the skills component of student learning and helped to inform the undergraduate conversations.

8.4   New Conversations, New Initiatives

We approached the Chief Examiner of 'Torts' to suggest a research and writing skills class for the 'Torts' students, specifically addressing the case note assignment. This was met with enthusiasm and it was agreed that the Law Library team would teach a class during an allocated two-hour workshop slot for each of the six streams early in the semester. Embedded teaching is preferable to an optional extra class: student attendance is likely to be higher and library teaching is given a more structured presence in student learning (Shumaker, 2012). This is even more important at the undergraduate level, where motivation levels can be lower than those of postgraduates.

8.4.1 Applying the Frameworks

Reflecting on the RSD, we identified that first year undergraduates begin at the *Prescribed* and *Bounded Research* end of the framework. The aim of our new 'Torts' classes, along with addressing the unit learning outcomes, is that students' progress to *Scaffolded Research*. The 'Torts' class activities are designed to ensure that foundational research skills are reiterated and practiced in class, before introducing research skills of increased complexity. Therefore, the class acts as a bridge between the faculty's expectations for the assignment and the students' current knowledge and capability. The assignment type, based on a specific court case, is common in the Law Faculty. It is generally divided into part A and part B. Part A requires students to summarise the facts of the case and explain the reasoning of the judges. Part B usually requires students to discuss the broader legal context and wider significance of the case. Part B requires a considerable degree of independent research, as well as critical thinking and analytical writing to communicate and apply the research, all of which can be found in the RSD facets. The RSD framework gave us a lens through which to identify that when students are developing a repertoire of skills required for research, they develop skills at different rates. The learning continuum offered by the RSD's Scope for Student Autonomy helped to identify this and to target our teaching to the lesser developed skills using an evidence-based approach.

Each two-hour class was taught collaboratively by a learning skills adviser and a librarian. The class was divided into three parts: 1. Self-reflection, 2. Research skills, and 3. Writing skills.

8.4.1.1 Self-Reflection

The underlying basis of both the postgraduate and undergraduate workshops was to encourage students to self-reflect on previous work to identify areas for improvement and therefore become more independent when tackling a new task (Willison et al., 2016). As a pre-class activity, we asked students to consider the case note assignment they had completed for 'Criminal Law' in the previous semester and reflect on any difficulties encountered. In small groups, students discussed the feedback they received and were encouraged to share issues raised with the class as a whole. We then discussed feedback on the Semester 1 case note assignment from the Criminal Law Chief Examiner and analysed a High Distinction (HD) case note example.

This was a highly prescribed activity using simple criteria relating to the RSD Skill Facet *Evaluate and Reflect*. Across the different streams, students commonly identified difficulties in writing about the case in Part B of the assignment, where they were required to research the issues and critically analyse the decision in the case. This showed us that students were able to 'reflect on and improve the process used' but that they needed guidance in finding, evaluating and analysing sources. The activity was also relevant to the RSD Skill Facet *Embark and Clarify*. By identifying

common difficulties in writing a case note assignment, students were able to clarify the questions, requirements and expectations of the current task.

8.4.1.2   Research Skills

We introduced practical activities designed to enhance a range of research skills that fell into the areas of expertise of both librarians and learning skills advisers. For example, a specific focus was applied to the facets *Find and Generate* and *Evaluate and Reflect*, as students had shown they lacked information seeking skills, particularly navigating complex databases to locate information and the ability to critically evaluate the resources they found. We aimed to move students from *Prescribed/Bounded* to *Scaffolded*, that is, to 'evaluate information/data and inquiry process using criteria related to the aims of the enquiry' and to 'reflect insightfully to improve own processes used'.

At the *Bounded* end of *Find and Generate*, students collect and record appropriate information and data using given methodology from predetermined sources. Part A of the case note assignment requires interpretation of a predetermined source; a case prescribed by the lecturer. Students are required to find the prescribed case in the authorised law report and write a short report on the case facts and the reasoning of the judges in reaching their decision. Most jurisdictions have an authorised report for each court and this version (if available) must be cited by students in assignments. Moving from these highly structured directions, Part B of the case note assignment requires a greater level of independent research. Our class activities took into account both aspects of the assignment, which were then mapped onto the learning continuum of the RSD framework.

We first conducted a structured class activity that involved finding the case with its correct citation and the legal issues involved. We then moved to a guided research exercise applying 'find and generate' skills. Students were asked to find *Australian Broadcasting Corporation v Lenah Game Meats* (2001) 208 CLR 199, a relevant Australian case that considers the concept of a tort of privacy in Australian law. Our aim was to deepen students' research skills by facilitating activities that required them to use the more advanced research functions of case databases such as CaseBase (available on the Lexis Advance database) and FirstPoint (available on the Westlaw AU database), which they had been introduced to during our classes in an earlier unit, 'Foundations of Law'. These functions include options to search within a case's database entry to understand the case history and to find publications referring to the case.

We asked students to find the case using their own devices and with our guidance, then we discussed with them ways to research the case. Student participation is crucial as it contributes to long-term learning by aiding initial understanding and facilitating memory. The ability to research a case in this way is important to students' comprehension, as the databases enable the researcher to see related cases and publications, including how other courts have treated the case being researched, for example,

with 'positive', 'negative' or 'neutral' consideration. This enables students to make informed arguments about the direction of the law in that area.

Our research skills teaching also needs to address the Legal Research Competencies for New Law Graduates (Australian Law Librarians' Association, 2019). These competencies mostly map to the *Find and Generate* facet in the RSD framework, for example focusing on the ability to 'Find the most authoritative version of a case', and 'Find the litigation history and judicial consideration of a case'. However, there are also competencies relating to *Embark and Clarify* (e.g. 'Determine main legal concepts for the legal issue being researched') and *Evaluate and Reflect* (e.g. 'Critically evaluate resources and results for currency, relevance and authority'). Table 8.1 shows a table mapping the TLO and ALLA competencies to the RSD framework's Facets of *Research* and *Bounded* Scope for Student Autonomy. This mapping shows how the RSD can help articulate or unpack the more discipline-specific contextualised competencies.

8.4.1.3   Writing Skills

We used a published case note (see Taylor & Wright, 2002) to highlight important skills and techniques for undertaking a case note assignment. Skills include the following: structuring the assignment; writing a thesis statement; displaying critical analysis; and displaying understanding of the case context and its significance, using particular sections from the case note to show these elements in practice. As discussed, the second part of the case note assignment requires students to expand upon what they have learnt about the issues in the case, to research the issues independently, analyse with evidence and write an essay. The case note assignment calls for independent research and importantly, evaluating sources and critically analysing the case. These are the aspects students struggle with; they are generally able to summarise the case, but find it difficult to articulate the broader context of the issues in the case and to understand the issues in enough depth to critically analyse the judgment.

Broadly, our goal was to promote student independence in approaching assignments and cultivating critical thinking for researching in law. This aligns with the scaffolded skills of the RSD framework, whereby 'scaffolds placed by supervisor enable the researcher(s) to independently' undertake a number of tasks. The final part of the class can be considered in light of the *Analyse and Synthesise* and *Communicate and Apply* facets of the RSD, and facilitates students to move from *Bounded* to *Scaffolded Research*. The *Bounded* description for analysis involves analysing trends and themes in several sources and synthesising knowledge into prescribed standard formats. *Scaffolded Research* is where, students 'ask rigorous, researchable questions based on new understandings'. It is important to note that students are unlikely to begin at the *Bounded* category for *Communicate and Apply* by demonstrating 'discipline specific language to relate their prior learning and newly developed knowledge', as they are very new to law. As such, we provided a case note published in a law journal to familiarise students with the style of language, structure and argument.

We emphasised that the case note must have a logical structure that communicates an argument.

8.5   Continuing the Conversation

The structure of our teaching reflects the strong relationship between research and writing, and brings together the TLOs of Thinking, Research, Communication, and Self-management combined with the learning continuum provided by the RSD framework. Team teaching with learning skills advisers and librarians helps to develop students' skills in a holistic way through the finding and integration of research sources relevant to law. Writing skills are linked to how students communicate the information that is the product of their research; a way to integrate research and assess students' research skills development.

We observed a significant improvement in students' preparedness to undertake the 'Torts' case note assignment after introducing the relevant frameworks. When students consulted with library staff on the first draft of their assignment at the Law Library's Research and Learning Point, we observed that their ability to clarify the requirements of the task had improved. They were able to structure their case note by first providing a brief outline of the facts of the case and then analysing its legal significance and wider societal implications. They were also more likely to use the authorised law reports and cite relevant primary and secondary sources of law sourced from reliable databases. They were able to synthesise the research and structure their case note to better argue the significance and wider implications of the case.

This improvement was also impacted by greater clarity of the assignment instructions and marking rubric, to which we contributed early on. In particular, we recommended that specific tasks were listed thereby enabling students to clarify questions, requirements, and expectations, as described in the *Embark and Clarify* facet of the RSD framework. As such, these changes are likely to have contributed to an overall improvement in performance. Our class provided a foundation for the students to engage with the assignment instructions and the corresponding marking rubric, so the two aspects are likely to have worked in combination to result in improved performance.

We continued our conversation with the 'Torts' chief examiner and tutors to discuss student performance in the case note assignment by meeting at the end of the semester. Faculty reported that overall students had improved in their ability to meet the requirements of the task, contributed to by our class. In particular, they noted that a high number of students structured their assignments well, addressed the questions and used headings for signposting. A contributing factor, as mentioned earlier, was improved clarity in assignment instructions from the lecturer, nonetheless we can also attribute the improvement noted to the focus we placed on case note structure in our class. Areas for improvement were also identified by the tutors, such as clarity of expression, using overly descriptive rather than analytical writing and the need to write in plain English, as well as insufficient or poor use of sources and citation

errors. Going forward, we have discussed that it may be beneficial to introduce a class exercise to specifically address the problems with clarity and expression in writing. We will also add more emphasis on correct citing and follow-up with after-class eLearning resources provided on Moodle.

Overall it was agreed that the provision of instruction and preparation for the case note gave the students sufficient tools to adequately complete a good case note assignment. Our curriculum conversations held with both undergraduate and postgraduate 'Torts' chief examiners indicate an improvement in students' ability to interpret assignment instructions, which has translated into improved assignment structure and writing. Close analysis and alignment of unit learning objectives with Law TLOs, ALLA Legal Research Competencies and the RSD framework have contributed to the successful design of scaffolded learning in 'Torts'. There is still room for ongoing refinement, of course, so the conversations will continue. There will be changes in assignments and new teaching staff, but the frameworks allow us to adapt to the shifting environment. Early discussion and ongoing conversations about the curriculum are critical to our aim of improving students' ability to undertake research independently. The adaptability of the RSD framework has enabled us to design a program that develops skills that encompass the research process as they relate to Law.

References

Australian Government Department of Education and Training. (2013). *Australian qualifications framework.* https://www.aqf.edu.au/.

Australian Law Librarians' Association. (2019). *Legal research competencies for new law graduates.* https://www.alla.asn.au/membership/alla-divisions/vic/legal-research-competencies-new-law-graduates/.

Australian Learning and Teaching Council. (2010). *Learning and teaching academic standards project—Bachelor of Laws.* Resource document. https://cald.asn.au/wp-content/uploads/2017/11/KiftetalLTASStandardsStatement2010.pdf.

Burton, K. (2017). 'Think like a lawyer': Using a legal reasoning grid and criterion-referenced assessment rubric on IRAC (Issue, Rule, Application, Conclusion). *Journal of Learning Design, 10*(2), 57–68.

Council of Australian Law Deans. (2012). *Juris doctor threshold learning outcomes.* Resource document. https://cald.asn.au/wp-content/uploads/2017/11/Threhold-Learning-Outcomes-JD.pdf.

Hughes, P. (2011). 'I've done the research, what now?': Developing critical thinking skills for law students. *Australian Law Librarian, 19*(1), 30–44.

Hughes, P., Tucker, K., & Knaggs, C. (2011). Sitting on the same bench: Complementing law learning outcomes. *Journal of Academic Language and Learning, 5*(2), A50–A59.

Kananatu, T. (2017, December 11–13). *Using the research skill development framework to construct marking rubrics for law assessments.* Paper presented at the international conference on models of engaged learning and teaching. University of Adelaide, Adelaide, Australia.

Shumaker, D. (2012). Embedded librarians in higher education. In D. Shumaker (Ed.), *The embedded librarian: Innovative strategies for taking knowledge where it's needed* (pp. 43–68). Medford, NJ: Information Today.

Taib, A., & Holden, J. (2013). 'Third generation' conversations—A partnership approach to embedding research and learning skills development in the first year. A practice report. *The International Journal of the First Year in Higher Education, 4*(2), 131–136. https://doi.org/10.5204/intjfyhe.v4i2.178.

Taylor, G., & Wright, D. (2002). Australian Broadcasting Corp v Lenah Game Meats: Privacy, injunctions and possums: analysis of the high court's decision. *Melbourne University Law Review, 26*(3), 707–735. http://www.austlii.edu.au/au/journals/MelbULawRw/2002/36.html.

Willison, J., & O'Regan, K. (2006, 2018). Research skill development framework. https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf.

Willison, J., Sabir, F., & Thomas, J. (2016). Shifting dimensions of autonomy in students' research and employment. *Higher Education Research & Development, 36*(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216

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Chapter 9
Sustaining Curriculum Design Conversations Transform the Teaching of Evidence-Based Practice in Health Sciences

Sharon Karasmanis and Fiona Murphy

Abstract This case study demonstrates how sustained conversation and collaboration between librarians and academic teaching staff have been critical for effectively embedding evidence-based practice (EBP) and the related information literacy skills (IL) into the curriculum design in Health Sciences courses at La Trobe University. Drawing on the Library Learning and Teaching Partnership Framework, we examine how a constructively aligned approach to embedding EBP was implemented in collaboration with discipline academic staff. We also outline how the learning activities and innovative online resources we developed in partnership with academics have contributed to transforming the teaching of EBP in Health Sciences. In our experience, if librarians equipped with the relevant skills and knowledge are involved in curriculum design conversations, it enables the scaffolding of IL skills at the appropriate steps of the students' EBP learning journey to ensure successful and sequential skill development.

9.1   Introduction

Facilitating and sustaining curriculum conversations about evidence-based practice (EBP) relies on librarians with expertise not only in EBP but also the skills to take a pedagogical approach to embed information literacy (IL) skills development in the curriculum. This combination is critical for individual librarian/academic relationships and at La Trobe University (La Trobe) it has resulted in a decade of productive conversations to embed and scaffold EBP skill development into Health Sciences' subjects and courses. The Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019) outlines

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the pedagogical approach—constructive alignment—that has informed and underpinned our conversations. The approach outlined in the LLTP Framework has solidified and standardized our practice. The ongoing training and development have been critical to ensuring that a high level of expertise is maintained in learning and teaching theory and EBP, to enable our Health Sciences librarians to bring expertise to curriculum design conversations with their academic colleagues and achieve successful outcomes. As such, our health librarians participate in the Australian Evidence-Based Practice Institute's continuous professional development activities in EBP, and constructive alignment in teaching practice.

This case study will examine how a constructively aligned approach to embedding EBP, including the IL skills needed to effectively engage in EBP, was implemented throughout the Health Sciences' course design in collaboration with discipline academic staff. We will discuss the importance of librarian participation in curriculum conversations in the subject design phase. In our experience, if librarians equipped with the relevant skills and knowledge are involved in curriculum conversations from the outset of the design process, it enables the embedding of aligned learning activities and scaffolding of skills into the curriculum over several years.

9.2 Rationale

A key curriculum issue around undergraduate information literacy (IL) skill development is the lack of coherent and intentional design. This results in episodic and fragmented approaches, rather than coherent and incremental development of skills, which means it is not always possible to determine the achievement of student learning. In response to the challenge presented by this curriculum issue, we have collaborated with academics to design a program of EBP skill development, appropriate for success in the health professions, that aligns intended learning outcomes (ILOs), learning activities, and assessment tasks. We used the learning-centered model for embedding IL into the undergraduate curriculum, as outlined in the LLTP Framework, to overcome the problem of IL as an 'add-on' to the curriculum. EBP and IL are now firmly embedded in the course and subject curricula and aligned in a meaningful way.

Within the LLTP Framework, the Information Literacy Matrix (ILM) guides scaffolding of skills, with four capability levels from Foundation to Advanced, and ILOs are specified across these four levels of proficiency. The ILM is used to supplement subject or course ILOs and guides the development of IL learning activities. Health Sciences' courses at La Trobe comprise a core first-year taught across multiple campuses and disciplines. This creates an opportunity for reaching a large student cohort (2,000) using a scaffolded approach for embedding skills into core sequential subjects over the first three semesters (18 months) of a students' discipline study, in nursing and midwifery, physiotherapy, prosthetics, and orthotics, occupational therapy, podiatry, human communication sciences, public health, dietetics and human nutrition, and orthoptics.

9.3 Approach

The principles underpinning constructive alignment according to Biggs and Tang (2011, p. 95) include 'the constructivist theory of learning, with alignment between ILOs of the course, learning activities, and assessment tasks'. Furthermore, constructivist theory states 'that learners use their own activity to construct their knowledge' (Biggs & Tang, 2011, p. 97), while Shuell (1986) advises 'what the student does, is actually more important in determining what is learned than what the teacher does'. Aligning learning outcomes, learning activities and assessment tasks is critical for learning success. Learning outcomes for EBP in the Health Sciences course, cover the use of research-based evidence in professional healthcare practice to help students understand the role of research evidence. This includes how evidence is developed, and how to interpret research methods and outcomes. Therefore, it is imperative that students have the IL skills to construct and implement effective research strategies, and can identify and locate authoritative sources of information, and the best research evidence relevant to their discipline.

Learning activities that address these key health sciences learning outcomes commence with simple activities in students' first semester of study, with more complexity introduced throughout subsequent semesters. As part of providing scaffolded support, we developed a range of resources and activities for embedding in the curriculum. These include online modules, videos, online assessment help guides, an eBook, and face-to-face tutorials. eLearning resources were all created by librarians in collaboration and consultation with discipline teaching staff. In addition, as part of the broader learning environment librarians monitor and respond to questions in learning management system (LMS) forums, and students have access to co-curricular activities provided by the library in the Learning Hub. This range of resources and activities ensures that understanding of EBP and the importance of systematic searching in health databases are developed and comprehensively supported and that students have a deep understanding of the importance of health literature as required for patient care by the midpoint of their course.

In semester one, the first-year subject 'Introduction to Professional Practice', is followed by 'Research and Evidence in Practice' in semester two, and 'Integrating Evidence into Practice' in the second year (first semester). Table 9.1 outlines the alignment of intended learning outcomes, learning activities, and assessment tasks in these three sequential subjects. In addition, the table indicates the varied ways additional support is provided in the broader learning environment to support this design. A detailed description of each subject can be found in Sects. 9.3.1–9.3.3.

9.3.1 'Introduction to Professional Practice'—*Year 1, Semester 1*

In 'Introduction to Professional Practice' students learn about the foundation concepts for professional practice in Health Sciences. This subject is also designed to focus on the development of information literacy skills. Our conversation with discipline academics in 'Introduction to Professional Practice' started more than a decade ago. In 2009, in collaboration with teaching staff, our Health Sciences librarians created a suite of Information Literacy online modules for Health Sciences to address key learning outcomes relating to health literature and EBP. Each module guided students in an area of learning, for example: finding peer-reviewed journal articles on a topic and assessing the quality of authoritative information. These modules have been reviewed and renamed as Achieve@Uni (http://latrobe.libguides.com/achieve). Other learning activities and resources which support learning in this subject include the following: subject-specific online assessment help guides; the online forum in the students' LMS, which we monitor to scaffold support for learning activities; as well as face-to-face help from the learning hub in the library.

9.3.2 'Research and Evidence in Practice'—*Year 1, Semester 2*

This subject is an introduction to research-based evidence in professional healthcare practice, as preparation for the second-year subject 'Integrating Evidence into Practice'. It was designed to give students an understanding of the foundations of research and evidence in practice, and the critical appraisal of the validity of research evidence. Conversations between academic teaching staff and librarians were critical in the design of online learning activities relating to information literacy and EBP in this subject. One of the principles of EBP is to ensure that the best available evidence, that is valid and clinically relevant, be used in the decision-making process for patient care (Erickson et al., 2018, p. 4). The subject ILO relating to searching for evidence (information literacy) required the students to construct a search strategy using a PICO method (Erickson et al., 2018, p. 20), and to conduct a keyword search in the health databases Medline and CINAHL to find the best available evidence on their topic, see Table 9.2. *Research and Evidence in Practice* (Erickson et al., 2018), an open textbook specifically designed for this subject, is used by students throughout these activities, in particular, the introductory Chaps. 1 and 2, and 3 on the actual search process, with critical appraisal of search results discussed in Chap. 4.

   Research and Evidence in Practice is the core textbook and required reading for the subject 'Research and Evidence in Practice'. The creation of this open-access eBook was a collaboration between academics and library staff and was the culmination of curriculum design conversations between the librarian and discipline teaching staff over seven years. Initially, a suite of online modules was created and made available

Table 9.1 Constructive alignment of EBP/IL in Health Sciences (first and second years)

Intended learning outcome	Assessment task	Learning activity	Learning environment support
Year 1, Semester 1 *'Introduction to Professional Practice'*			
Construct and implement effective research strategies to identify and locate authoritative sources of information	Find five or more peer-reviewed journal articles which provide authoritative evidence for the written essay	Finding and using information modules in Achieve@Uni to help locate credible sources of information. Can't I just Google? video gives a basic description of credible evidence Assessment help guides	Learning management system (LMS) Librarians monitoring the LMS forum Support from the library learning hub
Demonstrate understanding of referencing by correct use of APA6 referencing	Use correct referencing in APA6 style to create a reference list for the written essay	Consult Achieve@Uni Referencing module and use the Academic Referencing tool to guide you in correct referencing	LMS forum Library orientation classes Library learning hub
Year 1, Semester 2 *'Research and Evidence in Practice'*			
Develop an effective search strategy to address practice-based research questions	Create a search strategy to answer a practice-related question using the PICO format and keywords	Consult Chap. 3 in Research and Evidence in Practice to guide you in constructing your search strategy	Research and Evidence in Practice Library Learning Hub
Critically appraise some components on the validity of health research evidence	Critically appraise a research article, for a 1500-word critical appraisal assessment	Consult Chap. 4 in Research and Evidence in Practice to understand critical appraisal of health literature	Research and Evidence in Practice Library Learning Hub
Year 2, Semester 1 *'Integrating Evidence into Practice'*			

Table 9.1 (continued)

Intended learning outcome	Assessment task	Learning activity	Learning environment support
Generate and review relevant and answerable practice-related questions using a structured approach Develop and implement database search strategies to acquire evidence relevant to professional practice Appraise the strength of evidence generated by a range of methodologies Apply appraised evidence to practice-related problems, issues or situations	Create a search strategy, to answer a practice related question, using the PICO format Perform a systematic search in health databases, using Medical Subject Headings and keywords, and advanced search limits	Face-to-face tutorial classes Consult the Health databases to guide you through the search process Consult Research and Evidence in Practice for revision of research-based evidence for professional practice	Online learning resources, Research and Evidence in Practice; Health databases online guide Workshop based on research designs, with support from the Library Learning Hub

Table 9.2 PICO keyword search strategy. The question: Is bed rest or exercise more effective for the treatment of back pain in the elderly?

Population, Patient or Problem (P)	Intervention (I)	Comparative Intervention (C)	Outcome (O)
Back pain OR Backache OR Lower back pain *The database's Age Group limits are used to limit the search to the 'elderly' population group.	Exercise OR Physical activity	Bed rest OR Bedrest	Pain relief

to students in their LMS. These were subsequently updated in 2018 by librarians and academics and published as *Research and Evidence in Practice.* Because all the eBook authors were involved in some aspect of teaching 'Research and evidence in Practice', they were well aware of the challenges that students face in understanding introductory research, evidence-based practice, and finding peer-reviewed literature from health databases. The content was written in a conversational and informal style, intentionally designed to engage students. The videos included in the eBook have light-hearted content as well as interviews with La Trobe researchers who

are experts in their field. Furthermore, because *Research and Evidence in Practice* (Erickson et al., 2018) is an Open Educational Resource, and available for worldwide use in teaching practice, it contributes to open practice in education.

9.3.3 'Integrating Evidence into Practice'—Year 2, Semester 1

The above two examples of embedding EBP skill development in core Health Sciences' subjects are delivered to a mix of students from all health disciplines. In contrast, 'Integrating Evidence into Practice' in the second year is taught to specific discipline groups in allied health. As librarians, a more specific curriculum design conversation is required for this subject, as teaching staff prescribes the practice and discipline-related clinical questions to be taught in the classroom. This is a more tailored approach than the broader conversations for previous subjects for a generic Health Sciences cohort. Librarians, highly skilled in EBP, ensure that this prescribed content on complex clinical questions can be addressed successfully in the classroom setting.

This subject's embedded learning activity is face-to-face instruction, with a discipline prescribed clinical question for investigation in the class. This activity builds on student's prior knowledge scaffolded from the two first-year subjects. These classes are aligned to the subject's ILOs which are based on developing and implementing complex and comprehensive search strategies. These involve both hands-on tutorial classes and activities, which provide students with the skills and knowledge to successfully complete their assessments. More critically, however, students learn the search skills to become confident clinicians and ensure they can deliver high-quality patient care using the best available evidence to inform their decision-making.

In collaboration with discipline teaching staff, and depending on the needs of the discipline, a typical class may include the following:

- Refreshing what students learned in the first year by using the PICO framework to structure a search strategy, including the use of various search tips such as truncation and phrase searching.
- An introduction to subject headings such as Medical Subject Headings (MeSH).
- Hands-on experience searching for studies in Medline and CINAHL using both subject headings and keywords (systematic searching).
- Saving searches, creating a database account, and useful database limits.
- An activity where students locate medical subject headings in Medline and/or CINAHL.
- Depending on the discipline, other databases may also be included, such as the Cochrane Library, PEDro, or OTSeeker.
- Revision of what students have learned in the class, using the quiz software Kahoot! at the end of the session.

- In some disciplines, time is made available where students can work in their groups to locate studies for their assessments with the librarian on hand to help.

We also collaborate with discipline teaching staff on a clinical topic that we can workshop in the tutorial classes, as shown in Table 9.3, and other examples as follows:

- *For adolescents with articulation problems, does electropalatography (EPG) work better at increasing intelligibility compared to other interventions?*
- *Is a high protein diet effective for weight loss in older adults who are overweight or moderately obese?*
- *Is ginkgo biloba effective as an intervention for age-related macular degeneration?*
- *Do water therapies reduce or relieve pain in patients with rheumatoid arthritis?*

Prior to each semester, we determine the previous cohort's achievement of learning outcomes, to inform conversations about subsequent strategies going forward to address any learning issues. We also discuss tutorial scheduling and any changes to assessment that need to be addressed in classes to assist with alignment. While information literacy has been embedded into the Health Sciences curriculum since 2009, it is important to ensure that our ongoing curriculum conversations remain current and relevant in the Health Sciences environment. Every effort ensures that learning activities, whether tutorial classes, online modules, or quizzes remain engaging, current, and relevant to students.

9.4 Outcomes

Measuring the impact of the library's interventions is critical to excellence in practice. The influence on student learning, engagement, and overall student experience is constantly reviewed and provides further evidence of the impact of implementing the LLTP Framework for an enhanced learning experience, even if students already have some self-confidence in researching for assessments. Students have commented that they appreciate the face-to-face library tutorials, as it is an opportunity to ask questions and to gain practical hands-on experience.

Developing a range of online learning resources for teaching staff to use in a variety of ways is a service innovation that has influenced and enhanced student learning and engagement. Curriculum design conversations have been integral to the development of these resources. 'Why can't I just Google?' (https://youtu.be/N39mnu1Pkgw) was our first collaboratively designed video, integral to first-year students and has over 227,000 YouTube views. This original video, plus Achieve@Uni, online Assessment and Expert Help Guides (https://latrobe.libguides.com) and 'Research and Evidence in Practice' (Erickson et al., 2018) all provide the scaffolding that enables students to start engaging with what they need to know to augment and build on their existing information-seeking knowledge. The data from our research (Corbin & Karasmanis,

Table 9.3 PICO search example: What is the effect of ankle–foot orthoses on gait in patients after a stroke?

Population, Patient or Problem (P)		Intervention (I)		Comparative Intervention (C)		Outcome (O)	
MeSH	Keywords	MeSH	Keywords	MeSH	Keywords	MeSH	Keywords
Stroke	Stroke "cerebral vascular accident*" "cerebrovascular accident*"	Orthotic Devices	"ankle–foot orthos*"	No comparison		Gait	Gait Walk* Ambulat*

Limits: English Language; Publication Type

2010) makes it evident that using the LLTP Framework model for embedding assessable IL learning outcomes and activities in the curriculum is the most effective way to influence student learning and engagement. From the measurement of entry-level skills of first-year students (Salisbury & Karasmanis, 2011), through to the final longitudinal study (Salisbury et al., 2013), and evaluation of the *Research and Evidence in Practice* eBook (Erickson et al., 2018), the evidence shows continual sequential building of skills increases student confidence and positive academic perspectives.

9.5 Conclusion

Our journey has taught us much about sustaining curriculum design conversations. Most particularly, the importance of librarians' skills in collaboration, participation, and effective engagement with academic colleagues. To enable effective partnerships, we also learned the importance of health librarians being highly trained not only in EBP but also in learning and teaching theory and practice.

The ability for academics and librarians to speak the same language in evidence-based practice is essential when preparing students for practice in a clinical setting. The critical nature of expertise in EBP has been validated in the literature (Fineout-Overholt et al., 2005; Sackett et al., 2000). According to Herbert et al., (2011, p. 167), 'librarians are useful people and very important collaborators for evidence-based practice' and the 'best way to learn how to conduct efficient searches is to observe a skilled librarian conduct searches and then have the librarian give you feedback on your own search strategies' (p. 40). While Greenhalgh (2016, p. 19) states, '[Librarians] know the databases available, they know the complexities of searching, they know the literature…and they usually know just enough about the topic to have an idea of what you are looking for and the levels of evidence that are likely to be found'. Curriculum design collaborations are not always easy due to a range of factors; however, effective and ongoing conversations are critical between librarians and discipline teaching staff to continue critical evaluation of the effectiveness of learning interventions or changes to the curriculum, to improve and enhance student learning.

References

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university: What the student does.* Maidenhead: McGraw-Hill Education.

Corbin, J., & Karasmanis, S. (2010). *Evidence into practice: Evaluation of an innovative information literacy model for first year Health Sciences students.* [Paper presentation]. 13th Pacific Rim First Year in Higher Education Conference. Adelaide, Australia. http://hdl.handle.net/1959.9/526237

Erickson, S., Hodgkin, S., Karasmanis, S., & Murley, G. (2018). *Research and evidence in practice.* Melbourne: La Trobe eBureau, La Trobe University. https://doi.org/10.26826/1007

Fineout-Overholt, E., Melnyk, B. M., & Schultz, A. (2005). Transforming health care from the inside out: Advancing evidence-based practice in the 21st century. *Journal of Professional Nursing, 21*(6), 335–344. https://doi.org/10.1016/j.profnurs.2005.10.005

Fisch, E., Karasmanis, S., Salisbury, F., & Corbin, J. (2009). *Library pre and post experience survey: final report.* Bundoora: La Trobe University Library. Retrieved from http://arrow.latrobe.edu.au:8080/vital/access/manager/Repository/latrobe:20691

Greenhalgh, T. M. (2016). *Understanding research methods for evidence-based practice in health.* Wiley.

Herbert, R., Jamtvedt, G., Hagen, K.B., & Mead, J. (2011). *Practical evidence-based physiotherapy.* London, UK: Elsevier Health Sciences.

Hulett, H., Corbin, J., Karasmanis, S., Robertson, T., Salisbury, F., & Peseta, T. (2013). information literacy at university: A toolkit for readiness and measuring impact. *Australian Academic & Research Libraries, 44*(3), 151–162. https://doi.org/10.1080/00048623.2013.813372

La Trobe University Library. (2019). *Library Learning and Teaching Partnership Framework.* Melbourne: La Trobe University. Retrieved from https://doi.org/10.26181/6051815fa87e4

Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: How to practice and teach EBM*. Churchill Livingstone.

Salisbury, F., Corbin, J., & Peseta, T. (2013). *From cornerstone to capstone: information literacy collaboration across the curriculum* [Paper presentation]. 34th Triennial International Association of Scientific & Technological University Libraries Conference, Cape Town, South Africa. https://docs.lib.purdue.edu/iatul/2013/papers/20/.

Salisbury, F., & Karasmanis, S. (2011). Are they ready? Exploring student information literacy skills in the transition from secondary to tertiary education. *Australian Academic & Research Libraries, 42*(1), 43–58. https://doi.org/10.1080/00048623.2011.10722203

Salisbury, F. A., Karasmanis, S., Robertson, T., Corbin, J., Hulett, H., & Peseta, T. (2012). Transforming information literacy conversations to enhance student learning: new curriculum dialogues. *Journal of University Teaching & Learning Practice, 9*(3), 4. https://ro.uow.edu.au/jutlp/vol9/iss3/4/.

Shuell, T. J. (1986). Cognitive conceptions of learning. *Review of Educational Research, 56*(4), 411–436. https://doi.org/10.3102%2F00346543056004411

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Chapter 10
Co-designing Quizzes to Convince Quizzical Law Students

Melissa Spain and Anita Mackay

Abstract This case study illustrates how collaborative partnerships, one of the principles of the La Trobe University Library Learning and Teaching Partnership Framework (LLTP Framework), enabled curriculum design conversations between a librarian and an academic subject coordinator to successfully embed introductory legal research skills into a first-year law subject. The case study is an example of how developing and fostering ongoing curriculum design discussions, and collaboration, helps develop engaging and aligned content using Biggs' constructive alignment, another key feature of the LLTP Framework. In our respective roles of a librarian and an academic we have worked together to revitalise legal skills instruction using in-class instruction, and quizzes, designed to be an experiential learning activity. Embedded learning objects were designed and aligned to the relevant subject intended learning outcome and assessment using blended delivery to teach legal research skills, resulting in improved student engagement with legal research techniques. In this case study we review the successful collaborative process between a librarian and a discipline academic, the steps taken to implement constructive alignment, and how those steps were realised in the teaching of the subject.

10.1 Introduction

In the context of curriculum design, this case study looks at developing legal research skills teaching and assessment (in the form of quizzes) within the first-year core law subject 'Legal Institutions and Methods' (LIM) in the Bachelor of Laws degree. It discusses how the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019), was implemented in this process to embed research skills into this subject. Biggs (2014, p. 5) defined constructive alignment as the following:

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a design for teaching in which what is intended students should learn and how they should express their learning is clearly stated before teaching takes place. Teaching is then designed to engage students in learning activities that optimise their chances of achieving those outcomes, and assessment tasks are designed to enable clear judgments as to how well those outcomes have been attained.

Our case study focuses on the importance of legal research skills for students studying law and after they graduate and enter the legal profession. It outlines how the LLTP Framework principles of collaborative partnerships, constructive alignment and blended learning aided the curriculum planning process undertaken by the authors in our respective roles as academic subject coordinator and law librarian. Our conversations have covered how this process was informed by the literature as well as previous less-successful approaches to teaching legal research skills. This example of curriculum design to embed legal research skills into the subject utilised a two-pronged approach to the learning activities: (1) in-class instruction and (2) quizzes. Adhering to the principle of constructive alignment, these activities were aligned with one of the key Intended Learning Outcomes (ILOs) for the LIM subject which was to 'Demonstrate comprehension of fundamental legal research methods'.

10.2   'Legal Institutions and Methods' (LIM)

LIM is a compulsory first-semester, first-year subject for all students undertaking a Bachelor of Laws degree. Most of these students are new to university, but there are also postgraduate students undertaking the degree for whom studying law is new. The subject introduces the legal system in Australia and its core institutions, with an emphasis on courts. Students learn about the court hierarchy, the doctrine of precedent, how to read and analyse cases and observe court proceedings. The content is taught in one-hour weekly lectures, and by students attending a Victorian court and writing a court report that comprises 40% of their assessment. The subject covers legal methods, with emphasis on the fundamentals of legal research, case analysis and legal problem-solving.

Students are required to undertake independent research to locate three legal sources to support their analysis of the court proceedings they have observed. To support the development of independent research capability the subject also covers legal methods with particular emphasis on the fundamentals of legal research, case analysis and legal problem-solving. A key learning outcome for the course is to 'Demonstrate comprehension of fundamental legal research methods'. The learning activities aligned to this ILO are included in a two-hour weekly seminar with 25–30 students in each group. LIM introduces students to the necessary skills to locate two types of legal resources: primary and secondary. The former is legal decisions by courts and legislation made by parliament, and the latter is academic and expert commentary about the law. Learning is then assessed by the completion of two quizzes worth 7.5% each.

For new students, mostly from a generation that believes Google has the answers for everything, they are confronted with a whole new world of mysterious materials and bewildering legal databases to navigate. We recognised that the first hurdle to overcome is to make them aware of the importance of evaluating sources (one of the legal information literacies) for both their university studies, and their future as legal professionals. They need to learn the importance of using authoritative sources for primary law, as well as how to locate and evaluate secondary sources to ensure they choose reliable and high-quality options from the multitude of online and printed material available to them. Ultimately LIM can only introduce these legal research skills, but the aim is to emphasise and reinforce the importance of these skills which will provide a solid foundation for more advanced legal research skills that may be scaffolded at appropriate times throughout their degree.

10.3 Collaboration—Development of the Current Approach to Teaching Legal Research

Kaufman (2010) considers that effective legal research skills instruction requires cooperation and collaboration between librarians and academics to develop learning activities that are delivered at the point of need for highest learning impact and engagement. Using the LLTP Framework, curriculum design took place through a series of lengthy conversations to develop the approach and learning outcomes that each of us, in our different roles, saw as valuable for first-year students. Constructive alignment was achieved by designing learning activities that aligned with the research ILO and assessment. In-class instruction was in the context of the class topics, and the quizzes followed on from this instruction, providing hands-on practice and reinforcement of skills. These conversations were premised on mutual recognition of the importance of teaching these skills and each other's valuable contribution to student learning. The librarian respected the teaching pedagogy of the academic, relying on their subject knowledge to help align the skills content to course content. Likewise, the academic had an open mind and willingness to allow the librarian to constructively align the legal research skills with the subject ILO for optimal student learning.

We began our planning conversations several months before the semester and reflected on past experiences of teaching primary legal research skills (secondary research had not been taught previously). Two approaches had been tried: optional classes delivered by the librarian and video modules, both of which were followed by quizzes to test the knowledge acquired. Both approaches were standalone and not aligned to the course content. The optional classes were not well attended, as they were offered outside of the subject timetable and not delivered by their lecturer. Those students who did attend were disengaged. This disengagement is in line constructive alignment theory as formulated by Biggs and Tang (2011, p. 99) who state 'Where assessment is not aligned to the intended or other desired outcomes,

or where the teaching methods do not directly encourage the appropriate learning activities, students can easily "escape" by engaging in inappropriate learning activities that become a surface approach to learning'. Constructive alignment offered a well-respected pedagogical alternative for teaching these research skills.

The premise for a new approach was that students' initial exposure to legal research should be positive and engaging—hopefully leading to students having a positive mindset for future legal research skill instruction, as well as a good basic understanding of the processes. The quizzes were therefore redesigned to be an experiential learning activity, embedded in the curriculum to establish a sense of success and competency, rather than summative assessment, where knowledge is tested after completing a standalone module. This approach is supported by the literature: Cook and Babon (2017) establish that improved learning outcomes for students flows from 'active learning', with quizzes recognised as a method of active learning. As Trowler and Trowler (2010, p. 14) note: 'A substantial, robust body of evidence exists to support assertions that individual student engagement in educationally purposive activities leads to more favourable educational outcomes'.

Blended learning is another of the LLTP Framework's features and there is much literature on the blended delivery of teaching, where the content is delivered via a combination of eLearning and face to face, in class teaching. Udby (2014, p. 294) explains that active learning can successfully be implemented using blended delivery, and we embraced this approach by face-to-face class instruction, an in-class video, getting students to use the relevant databases during class, and two videos reinforcing the skills preparing them for the quiz. This is further supported by literature suggesting that using a variety of technology will 'help … students develop the skills necessary to conduct legal research in a constantly evolving environment' (Kaplan & Darvil, 2011, p. 177). Based on our combined reflection on past experience and the understanding of the literature, we resolved to use the active learning of the online quizzes and face-to-face seminar content, delivered by the seminar leaders and supplemented by two videos on finding case law and legislation.

10.4 First Prong: Embedded In-Class Instruction

10.4.1 First Illustration: Secondary Research

To assist students with the research component of their court report assessment, a two-hour seminar was dedicated to secondary legal research the week after they had been to court to observe proceedings. For the assessment, students were required to independently locate three academic sources relevant to the proceeding they observed in order to assist with analysis of their observations. Therefore, students would be searching for materials about topics such as self-representation and the impact of video-links on court proceedings. We also adopted an approach of Dewald (1999), which argues that the necessary elements of a successful program should include

the following: that it is course and assignment related, it is delivered at the point in time when needed, and it is embedded in the course. In line with this approach, we jointly developed the seminar content which was then delivered by academic teaching staff during timetabled seminars. It was proposed that content delivery by academic teaching staff during scheduled class time would remove the poor perception of this librarian-led skills instruction, a barrier we faced previously.

The seminar commenced with a 10-min video recorded by the librarian that covered steps for using legal research databases to search for sources such as journal articles, academic books and government reports (e.g. by law reform commissions). The video was also available on the Learning Management System for students to access during their own time. Following this, students were asked to use the search techniques covered by the video to locate one secondary source each and write the details on a whiteboard in the classroom. This source needed to be directly related to the video of court proceedings they had all watched in the seminar two weeks earlier. Teaching staff then facilitated a discussion about why some sources were preferable to others, raising matters including currency (including how to use older sources to find more recent sources), quality of the publication and whether the material was Australian (it was not impossible for students to use international material for their assessment, but it would be more challenging for them to connect this material to observations made in Australian courts). This discussion had to be managed delicately to avoid embarrassing students who had located sources that were less ideal.

The next stage involved students critically evaluating secondary sources. Students were asked to imagine that they had found three journal articles that they were provided extracts from (these were chosen for specific purposes, therefore the sources students located as part of the previous section of the seminar were not employed for the purposes of the deeper analysis). Students were then asked to follow a checklist from chapter 16 of their textbook covering secondary legal research that they were required to read before the seminar (Mackay & Chifflet, 2021, pp. 481–482). The checklist asked students to evaluate journal articles by answering questions about topics including 'reliability and objectivity of the author', 'reliability of the journal' and 'relevance to your topic'. Students worked in small groups to answer the questions on the checklist, which involved them looking up the journal website (e.g. to see if it was a peer reviewed journal) and the authors, to check their qualifications and expertise in the field.

Students were asked to rate the three journal articles by giving them a score out of ten. The purpose of the scoring was to demonstrate that not all journal articles are equal. Following the small group discussions and rating process, there was a full-class discussion about the relative quality of the three articles. Seminar leaders found that many students started from the premise that all published material is of high quality and accuracy. This is supported by a study that found that students commencing their law studies are not well versed at understanding information they have found online, and that 'their approach to information acquisition tends to be passive rather than active' (Gallacher, 2007, p. 192). This discussion demonstrated to students that this is a false assumption and that they need to be more critical of secondary legal

sources. The goal for the end of this seminar was that students would know (1) how to navigate appropriate databases and locate sources for their court report (from the video), and (2) be able to evaluate materials before deciding what to rely on for their assessment. This assisted them to focus on finding three high-quality sources for their court report, rather than a large volume of sources with limited relevance (such as sources about legal systems in other countries).

10.4.2 Second Illustration: Primary Research

The approach to in-class instruction on finding cases (one of the two primary sources for law), which is also the subject of one of the quizzes, was integrated into a seminar in which students were preparing a detailed analysis of a court decision (R v Wilson (1997) QB 47 (UK.); *Wilson* case). The lesson was planned using resources from the librarian about the use of a relevant database. Students were asked to start by entering the name of the *Wilson* case in Google, whereby they discovered that Google did not produce the correct decision. Students were then introduced to some legal databases for finding legal decisions and asked to locate the *Wilson* case. This was followed by spending some time analysing key components of the *Wilson* case, including how the judge had relied on earlier decisions (precedents).

Students were then asked to return to the databases to look up those earlier decisions. They were also shown how to find out if these decisions (the *Wilson* case and the others referred to in it) were still 'good law', that is to check if any of them had been overturned by a later court. They could then identify if the *Wilson* case had been used as a precedent for future cases. That is, they were looking forward and backwards from the case they were analysing. Finally, they could find academic articles (secondary sources) that analysed the *Wilson* case. This information is available to them in the case citator database. As well as giving critical instruction for the quiz, it was more engaging for students to look up a case that they were reading and analysing, and consequently had some understanding of—than if they had been simply given the name of cases to enter into the database.

10.4.3 Feedback

Student feedback indicated that the in-class instruction was helpful. An informal survey was sent to the student cohort that they could respond to anonymously. The survey asked 'what has been the most helpful aspect of the legal research instruction in LIM for you? Please explain the reasons'. The following comments were received:

- 'Having people actually show you how to access the materials and research rather than telling us about it. By showing us, then we know how to do it ourselves and using actual examples lets us know how the search will work'.

- 'The case citations, because previous to the research seminars I would have no idea what a citation was or how useful it can be in finding cases'.
- 'Going through it in the seminars has been the most useful because it gives us a chance to ask questions, make sure we can see that it's being done correctly (as the seminar leader takes us step by step through it)'.

10.5   Second Prong: Quizzes as a Learning Activity

The quiz on how to locate case law opened on the first day of the seminars in which students were taught how to find cases in the case citators. It was open for another week after the final seminars had been taught, therefore students had plenty of time to complete the quiz in their own time but were encouraged to do so while the tuition was fresh in their minds. A similar format was followed for teaching students how to find legislation, the other primary source for law.

We identified two key objectives that we considered necessary to ensure the quizzes were an optimal learning activity. First, the quizzes needed to be more engaging and the questions less difficult than in the past. The librarian designed the quizzes so that students used the actual live databases when answering the questions. This heightened engagement, firstly by requiring them to carefully follow step-by-step instructions listed in the questions, and then to execute the instructions in the actual legal databases that are essential for legal research. The relevant databases were hyperlinked to each question and opened in new windows allowing the students to switch between the questions and databases to follow the steps. (see Fig. 10.1).

Secondly, the quizzes should be written as a learning activity, with step-by-step instructions clearly outlined to deliver an authentic interactive experience with the databases. Each question was developed with a set of instructions clearly set out in gradual steps. A significant amount of time was spent ensuring that the instructions in each question were clear and precise. These steps explain the required process to find the answers in the databases. This direct engagement with the live databases delivered an interactive experience which was real, requiring the student to execute

Fig. 10.1 Example of a question from the Legislation Quiz by La Trobe University used with permission

a search from start to finish. The benefit of this approach has been discussed in the literature, and Biggs (2019) has stated that 'Learning is constructed by what activities the students carry out; learning is about what they do, not about what we teachers do'.

Together we ensured that the quizzes aligned with the subject content, that questions were related to the databases students will be using during their law degree, and as legal professionals after they graduate. By providing clear steps for them to follow to obtain the correct answer, we created a learning activity that introduced them to these databases in an accessible, non-stressful way. Although the quizzes were assessed (together comprising 15% of the marks for LIM), the students could attempt them multiple times in the one-week period that they were open, and there was no time limit on each attempt. This removed the stress of getting it right the first time and provided a supported learning environment for students to try again. After each quiz had closed, students were able to access their mark, view the correct answer, and access guidance to help them understand why that answer was correct.

10.5.1   Feedback

Student feedback indicated that they found the approach taken to quiz design helpful for their learning. The responses to the abovementioned survey question included the following:

- 'In each question of the cases quiz there were clear walkthrough instructions on how to enter information in the correct boxes to find the desired outcome. This was an advantage as it would otherwise be difficult to decide on which search tool to use and what information is used to search in the correct case'.
- 'The quizzes really help because they force you to practice it on your own'.
- 'The quiz because it goes through a step-by-step process that needs to be followed in order to obtain the correct answer. The instructions are also written clearly and in a way that is easy to understand'.

10.6   Final Reflections on Constructive Alignment in LIM

The key to the success of the approach to teaching legal research skills in LIM is our collaboration. Our regular conversations are an illustration of how librarians and academics can work together to provide constructively aligned legal research skills into a subject. The resulting two-pronged approach to embedded learning activity for research skills involves in-class instruction by seminar leaders that rely on resources developed by the librarian, and quizzes that are a learning activity, rather than a summative assessment. The in-class instruction has been embedded at the point in the subject where the skill is most relevant to students. As an effective and engaging learning activity the quizzes are an essential part of our constructively

aligned approach. What makes the quizzes such a successful element of this approach is that they

- are aligned to the subject ILOs;
- provide an activity that promotes active learning;
- provide an authentic opportunity for students to practice skills needed in subject assignment; and
- provide motivation and feedback via grading of the quiz.

We did this by designing questions that involved the use of live databases, with each question requiring the student to follow a series of steps to be taken in the appropriate databases which, if followed correctly, would lead them to the correct answer. The quiz results were universally high (for all students who completed the quizzes) but more importantly this approach heightened student engagement with, and enthusiasm for, legal research techniques that we hope will be sustained and applied to the research for later assessments as they progress through the course. It also provides a basis for scaffolding more advanced research skills throughout their law degree, and consolidating the work-ready research skills which will be valued and required beyond their degree in their future careers as legal professionals.

References

Biggs, J. B. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education, 1*, 5–22.

Biggs, J. B. (2019). Constructive alignment. [Blog post]. https://www.johnbiggs.com.au/academic/constructive-alignment/.

Biggs, J. B., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). Maidenhead: McGraw-Hill Education.

Cook, B. R., & Babon, A. (2017). Active learning through online quizzes: better learning and less (busy) work. *Journal of Geography in Higher Education, 41*(1), 24–38. https://doi.org/10.1080/03098265.2016.1185772.

Dewald, N. H. (1999). Transporting good library instruction practices into the web environment: An analysis of online tutorials. *The Journal of Academic Librarianship, 25*(1), 26–31. https://doi.org/10.1016/S0099-1333(99)80172-4.

Gallacher, I. (2007). 'Who are those guys?' The results of a survey studying the information literacy of incoming law students. *California Western Law Review, 44*(1), 151–217.

Kauffman, B. (2010). Information literacy in law: Starting points for improving legal research competencies. *International Journal of Legal Information, 38*(3), 339–351. https://doi.org/10.1017/S0731126500005904

Kaplan, A., & Darvil, K. (2011). Think and practice like a lawyer: Legal research for the new millennials. *Legal Communication & Rhetoric: JALWD, 8*, 153–190.

La Trobe University Library. (2019). *Library learning and teaching partnership framework.* Melbourne: La Trobe University. https://doi.org/10.26181/6051815fa87e4.

Mackay, A., & Chifflet, P. (2021). *Legal institutions and methods* (2nd ed.). Pyrmont, NSW: Thomson Reuters.

Wilson, R. V. (1997). QB 47 (UK.). https://www.iclr.co.uk/document/1991004794/casereport_85236/html.

Trowler, V., & Trowler, P. (2010). *Student engagement evidence summary*. York, UK: Higher Education Academy.

Udby, L. (2014). Using online quizzes for active learning and constructive alignment in a blended learning setting. In L. Ulriksen & J. Solberg (Eds.). *Improving university science teaching and learning—pedagogical projects 2014, 7*(1–2) 393–320. Copenhagen: Department of Science Education University of Copenhagen. https://www.ind.ku.dk/publikationer/up_projekter/2014-7/PedagogicalProjects2014.pdf.

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Part IV
Case Studies Theme 3—Motivating Students and Developing Skills

Chapter 11
Curiosity, Collaboration and Critical Reflection: Developing Primary Source Literacies in an Undergraduate History Subject

Clare O'Hanlon and Sharon Karasmanis

Abstract   Motivating students and developing research skills is important for a positive learning experience and ensuring student academic success. This case study examines a successful curriculum redesign initiative for a history subject 'Slavery and Human Trafficking: Forced Labour in a Modern World' at La Trobe University. We discuss how a librarian and subject coordinator collaborated to motivate students around the importance of developing primary source literacies, review how the Library Learning and Teaching Partnership Framework shaped embedded learning activities and explore the need for reflective practice in library teaching practice. This initiative took a proactive approach, to seamlessly integrate information literacy skill development in order to extend and enrich online and face-to-face learning opportunities throughout this complex and challenging subject.

11.1   Introduction

Wentzel and Brophy (2014) clearly articulate the intentions and importance of linking learning activities to the curriculum, noting how motivation fits in with effective curriculum design and learning activities:

> Learning is fun and exciting, at least when the curriculum is well matched to students' interests and abilities and the teacher emphasizes hands-on activities. When you teach the right things the right way, motivation takes care of itself. If students aren't enjoying learning, something is wrong with your curriculum and instruction (p. 1).

This quote exactly relates to our challenges in motivating students to develop competency in primary source literacies. Teaching students in the 'right way' as part of curriculum redesign, enables students to connect, engage and enjoy their learning. Using the learning journey as articulated in the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019), helped us focus on how we connected learning, content and teachers so that students could

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enjoy the benefits of digital and face-to-face learning, where the mode of learning matched the complexity level as required for the different topics.

Collaboration with teaching and educational design staff was central to the success of this initiative. Crisp (2017) outlines this further with her paper on collaborating for impact in teaching primary source literacy, stating that 'bringing in partners to collaborate on effectively teaching with primary sources makes the task of encouraging primary source literacy seem more manageable for all parties involved' (p. 8). Weiner et al., (2015, p. 8), in their study on archival literacy competencies, noted the importance of archivists, faculty staff and librarians collaborating to integrate competencies in the undergraduate history curricula. Both papers acknowledge the link between collaboration and building competency, recognising the collective contributions of each expert partner. Building and integrating competencies and understanding in this specialised area is critical to enable students to find and access primary sources in history.

'Slavery and Human Trafficking' is a core second-year subject for students undertaking a history major, and an elective subject taken by students in other majors, particularly politics, legal studies, gender, sexuality and diversity studies and international relations. The subject is taught throughout five La Trobe University campuses within Victoria, Australia. Enrolment numbers vary across campuses with face-to-face learning activities tailored to local requirements, but all the online learning activities were the same. In 'Slavery and Human Trafficking', the outcome of strong collaboration and connections between content, students and teachers is the seamless integration of primary source literacy skill development and history content. For students, this teaching connects history content and information literacy instruction in an attempt to enhance the learning experience by tailoring it to the context of their subject. Reflection contributed significantly to continuously improving the student learning experience, as discussed later in this case study. Continuous quality improvement happened throughout the semester, and after each year of delivery, particularly where students needed extra support around understanding and discussion of complex topics.

11.2 Rationale

Developing skills in the student's learning journey is clearly outlined in the LLTP Framework, from;

1. recognition of prior knowledge,
2. building on that knowledge and skill base,
3. consolidation of critical discipline knowledge,
4. independence in research and lifelong learning.

In 'Slavery and Human Trafficking', one of the main learning outcomes was development of proficiency in primary source literacy. In 2018, a joint task force set up by the Society of American Archivists (SAA) and the Association of College and

Research Libraries (ACRL) developed a set of guidelines for developing primary source literacy (SAA/ACRL 2018). According to these guidelines, primary sources are 'compelling, direct evidence of human activity', with primary source literacy intersecting with information and digital literacies, rather than working in isolation. Therefore, the LLTP Framework with a focus on information and digital literacies across the student learning journey remains very relevant in supporting the development of skills in this subject.

The LLTP Framework pays attention to the modes of learner motivation and engagement (p. 7), including learner–teacher interaction, such as specialist knowledge transfer; learner–learner interaction, where students facilitate their own learning with their peers; and learner–content interaction, where students independently access online resources such as quizzes, reading lists and research guides. Learner engagement is used effectively in this case study to maximise the face-to-face time, and to build specialised skills holistically throughout the subject.

11.3   Our Approach: The Student Learning Journey

The literature expands on the importance of explicit competencies for undergraduate students undertaking archival research. Competencies identified for undergraduate students include the following:

- accurately identifying primary sources;
- gathering and locating primary sources;
- using a research question, evidence and argumentation to advance a thesis;
- interpretation, analysis and evaluation;
- following publication and referencing protocols (Rutner & Schonfeld, 2012; SAA/ACRL 2018; Weiner et al., 2015).

Weiner et al. (2015) state, even students who are information literate may not transfer that skill set when working with archival materials, as different skills are required to find, evaluate and reference these sources. Therefore, specialised instruction is critical for developing proficiency in undergraduate history education.

Appended to the LLTP Framework is the Information Literacy Matrix (ILM). The information literacy capability levels in the ILM were a useful starting point to guide teaching that built on students' prior knowledge in 'Slavery and Human Trafficking'. Furthermore, as there was a variation in the range of prior knowledge and skills within this cohort, our teaching had to allow for this mix of abilities. Whilst all students were at similar stages of finding and evaluating secondary sources, the history majors were consolidating critical knowledge around primary sources. Students studying this subject as an elective were still building foundational knowledge, but were able to bring other knowledge and experiences, particularly around the socio-political context.

Our approach to developing primary source literacies across the student learning journey involves learner–content, learner–learner and learner–teacher interaction

(LLTP Framework, p.7). We developed a simple and stimulating structure for learner–content interaction, so that students could engage independently with weekly course content in an enhanced digital environment. The recent Guidelines for Primary Source Literacy (SAA/ACRL 2018) affirmed our approach, and succinctly illustrated the skills that students need to develop. They noted the intersection of primary source and other literacies (such as information, digital and visual), therefore, the LLTP Framework was a good fit for our purpose as guidance for our teaching activities. The guidelines noted, too, the importance of analytical, ethical, theoretical and practical concepts and considerations.

11.3.1 Learner-Content Interaction

Finding and evaluating primary sources in a digital environment is one of the key challenges facing undergraduate students, therefore, the general principles of good online subject design need to be applied. The main criteria in developing learner–content engagement was ensuring simplicity in online design, which in this case study involved easy access and navigation, clear and consistent layout, clear expectations and instructions and avoidance of information overload by limiting the number of readings.

Using the learning management system, we set the scene up front and made learning expectations explicit to students each week. The key was simplicity and included a mix of activities constructively aligned to learning outcomes in the subject. Collectively, these activities provided the required knowledge, in a scaffolded way: from simple viewing to deeper learning via reading and discussion. Each week students learned a bit more about slavery and human trafficking themed around different geographical regions and time periods. The weekly learning activities included a link to a brief primarily text-based document, such as a letter or a treaty (primary source); a journal article or book chapter (secondary source); and a video (usually a documentary or a media representation). This video was a key part of the engagement, it helped with 'capturing their curiosity and connecting them to people and events from the past' (Weiner et al., 2015, p. 156). There was also information around assessment tasks and an online assessment help guide, all constructively aligned to the learning outcomes within the subject.

11.3.2 Learner–Learner Interaction

We were keen to introduce peer learning to help students collectively consolidate their engagement with the content. For example, the subject matter was sensitive and emotionally challenging to discuss online, with students showing varying degrees of confidence and familiarity with the subject matter. Consequently, we felt the face-to-face environment empowered students to participate, learn and engage in a more

comfortable and informal space. Each week, students were asked to explore assigned primary sources, building and scaffolding complexity as the semester progressed. We were also aware of building students' historical consciousness, defined by Glencross (2015) as 'the understanding of the temporality of historical experience or how past, present and future are thought to be connected' (p. 413). It was important to guide students in connecting them to visualise the past with the present, particularly legacies related to race, ethnicity, gender and class. This helped students and teachers foster empathy which was essential for discussing and reflecting on disturbing events and material in this subject.

The subject coordinator was pleased with the face-to-face discussions and felt the students were more engaged in an informal and relaxed environment. Because the expectations around the learner content were clear and simple, students came to their tutorial discussions more prepared and knowledgeable, and able to focus on complex discussion. Ultimately, the learning design maximised the face-to-face time in tutorial groups by creating more efficiency within the subject timetable for student discussion, assessment help and feedback. In a study conducted by Weiner et al. (2015), students stated that they 'connected with the people whose first-hand accounts they used, and that experience made history real for them' (p. 156). Similarly, we found that interpersonal connections really brought history alive for highly engaged students.

The tutorials were successful for student learning and motivation, as they offered guidance and advice through extensive assessment preparation and tips, interactive and engaging exercises, as well as group work. Regular attendees developed group connections and enjoyed the casual, easy-going atmosphere within and outside of tutorial times. Some students, encouraged by the subject coordinator, worked together and improved their mark in this manner, as tutorials were frequently geared towards assessments. The subject coordinator packaged vital exercises, such as summarising findings in a stimulating and accessible manner.

11.3.3 Learner–Teacher Interaction

As students had clear expectations around online content interaction, and the tutorials facilitated active discussion between tutors and peers, our learner–teacher engagement was able to focus on the transfer of more complex subject matter in the face-to-face environment, and the provision of more extensive assessment help, feedback and support. The following example provides a snapshot of the importance of learner–teacher interaction from the lecturer's experience, and how deep discussion was integral to students' understanding of complex issues.

> The two-hour lecture was updated to include an interactive hour within the session in which students engaged with all or parts of the online preparation (or alternative materials that conveyed the same points) in class, and had more opportunities to ask questions and receive assessment help from teaching staff. For example, during the week on Islam in medieval and early modern Spain, students were able to achieve a superior learning experience on the *Assassin's Creed* (movie) through deep discussion of this representation with the lecturer.

Fig. 11.1 Assessment help guide by La Trobe University library used with permission

> This approach stimulated curiosity, and the group discussions led to deeper consolidation of knowledge and independence in learning. This interactive format took considerable planning, effort, reflection and reiteration to translate across all campuses with varying class sizes.

The embedded face-to-face research skills tutorial and complementary Assessment Help Guide were designed by the librarian to help students complete each assessment task, particularly their document exercise and research essay (Fig. 11.1). These tutorials were initially held early in semester and designed around the first assessment on finding, evaluating and referencing primary sources. However, the timing and content evolved to focus more on the final research essay which required more advanced and independent research in finding, evaluating and consolidating primary and secondary sources.

As the subject was quite popular with students from disciplines other than history, the guide and tutorials had a strong focus on finding and evaluating the reliability and authenticity of online primary sources, and developing primary source literacies on topics related to slavery and human trafficking.

11.4 Outcomes

The driver for curriculum redevelopment in this subject was a move to a more blended approach in teaching to take advantage of new digital learning opportunities. Considering this curriculum redesign was for a previously successful subject, the new design elements were carefully engineered to focus and improve on the following: a simple approach to digital learning content; a holistic approach to maximising face-to-face time with the teaching team; and reflective practice for evidence of effectiveness and continuous quality improvement.

The LLTP Framework was instrumental in steering the librarian's contribution to educational outcomes in this subject, particularly learner engagement (critical for students of history), development of constructively aligned learning resources, student support and skill development. A focus on the student learning journey helped us really define all those elements of student interaction, i.e. the content, the peers and the teachers. With a refocus on subject design, the essential elements for skill development were:

- a critical focus on primary source literacies;
- facilitating students' connection with the past and developing a historical consciousness;
- provision of assessment support and feedback;
- building more face-to-face time into the redesign for discussion and consolidation of content; and
- the creation of constructively aligned interactive learning resources.

For librarians, an important outcome of collaboration is the development of subject expertise. Likewise, Luca (2019) reflects on library professionals developing disciplinary expertise in a new subject area. His reflections include the importance of close engagement with academic staff, the discipline itself, reflective practice and scaffolding learning experiences to progressively build information literacy skills.

11.5 Clare's Reflection

As the history librarian involved in 'Slavery and Human Trafficking', Luca's (2019) considerations resonated strongly with my experiences developing expertise in history as I became more embedded in the subject and closely connected with history students, academics and the discipline itself. 'Slavery and Human Trafficking' was one of the first subjects I was able to closely collaborate with academics on and has led to more collaboration across core history subjects and beyond. As I have become more connected, my knowledge of history research and learning needs has grown, and I have transformed my teaching accordingly. Similarly to Luca, as I became more connected to the history discipline, my confidence and disciplinary knowledge and understanding of the subject matter grew, and I made gradual changes each year in order to make my teaching become more student-centred and interactive. I became more of a facilitator than a teacher, encouraging students to ask questions and think critically about the subject matter.

Building on the theoretical principles within the LLTP Framework and my growing knowledge of the history discipline, I also engaged with critical theories and pedagogies, particularly Freire (1996) and hooks (1994), to help me develop my teaching practice. Given the subject is about slavery and human trafficking histories, as well as contemporary legacies, I felt it was important to encourage students to question and think very critically about all sources found on the topic. I encouraged students to look for community archives and creative works, rather than rely

solely on government records as primary sources, in order to think about and counter the silences and biases of government records. I became more of a guide or facilitator roving around the classroom responding to student queries, than a teacher at the front of the room behind a lectern, therefore gaining confidence in facilitating learner–learner engagement. I encouraged students who were working on similar essay questions to sit near each other so that they could help each other (e.g. collectively brainstorm keywords and Boolean search strategies). I feel I have begun to move away from what Freire calls the 'banking approach' to education towards something more student-centred and less hierarchical.

Jacobs' (2008) article on information literacy and reflective pedagogical praxis illustrates ways in which academic librarians can theorise their work, particularly in their teaching, and become more creative, reflective and critical professionals. Jacobs also highlights research which suggests that academic librarians often feel under-prepared by their formal library and information studies education for the large amount of instructional work they do. They argue that learning instructional techniques and strategies needs to be complemented by engaging with pedagogical theory and the broader educational context on campus, and this has resonated with my experience. Developing a praxis-based pedagogy for information literacy, along with increasing my knowledge of history, has helped me transform my teaching in ways that Jacobs advocated for.

More recently, Corrall (2017) highlights different types of reflective practice, critical reflection and reflexivity in order to build a case to argue that it needs to become a threshold competence for library and information professionals, particularly those involved in teaching information literacy. Corrall illustrates that this is quite commonly included in social work, teaching, and nursing and health care training and practice, but is less common or at least less explicitly included in information studies education. As my knowledge of history and my historical consciousness has grown, I have become more confident in my teaching and feel I have become better at encouraging students to develop skills and think critically and ethically, and to let their questions drive the direction of the class more.

11.6 Conclusion

This case study offers an example of how motivating students and developing their research skills has enabled us as educators to enhance our own skills in teaching and facilitation through collaboration and continual reflection. Encouraging curiosity, connecting the past with the present and learning about primary sources, were all integral to students' connection, immersion and success in this subject. With the LLTP Framework for guidance, our excellent collaboration and continual reflection, we were able to contribute to the redesign of this subject to achieve a deeper and more meaningful learning experience for students. In 2019, this approach was granted an internal University award, and is starting to influence curriculum design and learning activities for other subjects in history.

References

Corrall, S. (2017). Crossing the threshold: reflective practice in information literacy development. *Journal of Information Literacy, 11*(1), 23–53. https://doi.org/10.11645/11.1.2241

Crisp, S. (2017). Collaborating for impact in teaching primary source literacy. *SAA Case Studies on Teaching with Primary Sources, 1*, 1–11.

Freire, P. (1996). *Pedagogy of the Oppressed,* Penguin.

Glencross, A. (2015). From 'doing history' to thinking historically: Historical consciousness across history and international relations. *International Relations, 29*(4), 413–433. https://doi.org/10.1177/0047117815608233

hooks, b. (1994). *Teaching to Transgress: Education as the Practice of Freedom,* Routledge.

Jacobs, H. L. M. (2008). Information literacy and reflective pedagogical praxis. *The Journal of Academic Librarianship, 34*(3), 256–262. https://doi.org/10.1016/j.acalib.2008.03.009

La Trobe University Library (2019). *Library Learning and Teaching Partnership Framework.* Melbourne: La Trobe University. Retrieved from https://doi.org/10.26181/6051815fa87e4

Luca, E. J. (2019). Reflections on an embedded librarianship approach: The challenge of developing disciplinary expertise in a new subject area. *Journal of the Australian Library and Information Association, 68*(1), 78–85. https://doi.org/10.1080/24750158.2019.1573631

Rutner, J., & Schonfeld, R.C. (2012). *Supporting the Changing Research Practices of Historians.* Ithaka S+R. Retrieved from https://sr.ithaka.org/wp-content/uploads/2015/08/supporting-the-changing-research-practices-of-historians.pdf

SAA/ACRL (2018). *Guidelines for Primary Source Literacy.* SAA/ACRL/RBMS. Retrieved from https://www2.archivists.org/sites/all/files/Guidelines%20for%20Primary%20Souce%20Literacy_AsApproved062018_1.pdf

Weiner, S.A., Morris, S., & Mykytiuk, L.J. (2015). Archival literacy competencies for undergraduate history majors. *American Archivist, 78*(1), 154–180. https://doi.org/10.17723/0360-9081.78.1.154

Wentzel, K. R., & Brophy, J. E. (2014). *Motivating Students to Learn*, 4th ed. Taylor and Francis.

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Chapter 12
Framing the Big Picture: Developing Research Confidence in Nursing Students

Aimee Turner, Anne Young, Cassandra Freeman, and Tomas Zahora

Abstract This practice-based example explores how Monash University Library used the research skill development (RSD) framework to develop an intensive orientation program for a diverse group of postgraduate nursing students. We addressed the needs of this mature-age, return to study, professional cohort by creating a three-day program that aimed to build transferability of skills required for successful research. The RSD framework guided us as educators in a number of ways, including providing a structure for the design of the workshops, creating a range of authentic materials that covered all phases of the research process and scaffolding the requisite research skills we wanted the students to develop. The workshops built students' confidence, self-reliance and preparedness for undertaking this course.

12.1 Introduction

Universities in Australia are increasing postgraduate coursework enrollments and with this comes the expectation that students would have developed foundational research skills in undergraduate degrees. However, this is not always the case, particularly among international or mature-age students returning to study (Stagg & Kimmins, 2014). A lack of experience with academic research means that many postgraduate students lack the skills to identify their information needs and critically appraise the literature. As a result, students are often overwhelmed by the volume and diversity of the literature they need to consult which can have a negative impact on their confidence, persistence and motivation, even in undertaking generic research tasks (Hamlin et al. 2016; Hays and Sharp 2018).

An example of a course facing these challenges is the accelerated Master of Nursing Practice degree at Monash University. The degree is open to students who

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have a bachelor's degree in any field of study and provides instruction and training that will qualify students to become registered nurses. As such, it has a high number of international and mature-age students, for whom the acquisition of academic and disciplinary language, combined with the need to develop and apply higher-order skills relevant to research, poses a major challenge. In the space of two years, students are required to master not only practical clinical skills required to register in their profession but also the skills required to undertake research. Furthermore, these students struggle to understand the relevance of higher-order skills (such as those described by Bloom's Taxonomy, Bloom et al. 1956) for their future nursing practice. Faced with such an intensive program, students often approach individual assignments in a linear 'to-do-list' manner. Viewing assignments in isolation like this means that they do not readily transfer the skills they have learned from one assignment to the next. As a result, they take a long time to develop a big-picture view of research and the direct relevance it has for their future career as nursing practitioners.

At Monash University Library (MUL), research and learning skills teams, comprising librarians and learning skills advisers, collaborate with academics to provide academic skill support in the curriculum. In this case study, we developed four workshops as part of the orientation program for the Master of Nursing Practice. These workshops focused on the specific research skills needed for the assessment tasks that students were to encounter in their Masters coursework program.

MUL offers all students research and learning support through one-to-one 'drop-in' consultations. In 2016, we observed a steady increase of students from the Masters of Nursing Practice requesting research and learning consultations from the library. The numbers seeking support from the library equated to almost 60% of this cohort which stretched our library staffing resources. When we became aware that enrolments in this course were expected to double we felt that our ability to meet the demands of an increased cohort through the 'drop-in' model would be unsustainable.

We noted a pattern in the types of queries received at 'drop-in' and at consultations, which helped us to plan our intervention. Queries could be broadly divided into three areas. First, the students appeared to lack the skills necessary to navigate and deal with the quantity of literature available to them. Secondly, their previous learning experiences had not prepared them to undertake analytical and critical approaches to literature. And thirdly, they struggled to develop an academic voice in their writing. These three areas of concern indicated that students lacked an ability to apply a horizontal transfer of previously developed research skills to the nursing context (Benander, 2018).

Furthermore, the way in which students responded to learning tasks reflected a fragmented and de-contextualized understanding of how research skills interconnect and relate to each other as part of a broader iterative process, understood as 'research'. In particular, we observed that students were unable to transfer skills acquired through engaging with research tasks in one unit to a research task in another unit. As Benander (2018) points out, there are many barriers to transferability including a passive approach to learning (i.e., lectures), a preference for well-structured problems at the expense of real-world examples, and an inability to connect research to

practice (i.e., application in a nursing context). This inability to transfer research skills between similar contexts risked students' capacity to engage in research-related tasks with increased self-reliance. For example, in assignments that required finding and analyzing peer-reviewed articles, students would approach searching for literature and critical analysis as unrelated separate tasks. As a result, rather than knowledge growing in interconnectedness and sophistication over time, students perceived these learning activities and associated skills as compartmentalized blocks.

This case study describes how we, in consultation with course coordinators and academic staff, designed and evaluated a research skills development program to address the needs of the Master of Nursing Practice cohort through more comprehensive and explicit coverage of the research process as described in the research skill development (RSD) framework (Willison and O'Regan 2006, 2018). Therefore, the RSD framework was an important tool informing the design of our program and how it was evaluated. This program has been offered twice annually from the second half of 2016 and has been refined over this period.

The RSD framework is a conceptual model that describes the range of skills involved in the research process (Facets of Research) and plots them across a scaffolded learning continuum (Scope for Student Autonomy). In this way, the RSD framework guided us pedagogically by providing us with clarity around the skills we were teaching and a logical structure to inform the design of our research skills program.

12.2 Rationale

At Monash University, the RSD framework had previously been effective in mapping, scaffolding and enhancing information and research skills in a number of faculties and programs (Taib, 2018; Torres & Jansen, 2016). Torres and Jansen (2016) note that a key benefit of the RSD framework for library skill development programs is in providing a holistic representation of the research process that is 'cyclical and incremental' (p.26). Similarly, our previous experience applying the RSD framework for students' skill development among Master of Public Health students indicated that a teaching approach guided by the RSD framework could offer a way to counter prior learning experiences of this cohort, where research skills had been presented as a linear construct.

Also challenging the Master of Nursing Practice students was the ability to manage large quantities of literature required for a research task. As the RSD framework unpacks the range of skills associated with research, which include clarifying information needs, finding, evaluating, synthesizing, managing and communicating information, the explicit description of these skills proved valuable for designing learning activities to enhance students' ability to undertake research tasks. Benander (2018) has noted that what is critical for students to be able to transfer skills to new contexts is experiencing research skills in an active, authentic environment that provides opportunities to build understandings of what these skills involve. As a conceptual model,

the RSD framework is not locked within a given disciplinary area. This suggested that the RSD would be a suitable framework to guide our program design as it offered the flexibility required to support students' understanding that the skills associated with researching can be transferred to other learning activities and contexts—in this case, the research task. Furthermore, by providing educator guidance as to how research skills can be scaffolded in a learning program, we considered that the RSD framework would offer us a holistic approach to designing a skill development program, which aimed to enable students to acquire the requisite skills to undertake self-directed research.

12.3 Method

12.3.1 Logistical Considerations

Discussions and consultations with the Faculty of Medicine, Nursing and Health Sciences identified that students' undertaking the Master of Nursing Practice needed to develop skills and knowledge to undertake research. This included the ability to conceptualize research skills as an interconnected process rather than individual skills taught disconnected from each other. We responded by designing a research skill development program informed by the RSD framework. The series of workshops we designed aimed to show how each research skill or skill facet (as described by the RSD), interconnects and intersects as a complete process, embedded in how students undertake research assignments.

We were limited to the University Orientation period to deliver our program, as the teaching semester was largely dedicated toward students undertaking clinical placements. However, the orientation period allowed us the time to deliver the program as a series of three half-day workshops taught over consecutive days. The workshops were designed to be as hands-on and interactive as possible, in spite of the challenges imposed on us of only having a traditional, tiered lecture theatre available to teach the sessions. As such, we needed to consider how to deliver this program effectively in this formal space.

12.3.2 Introducing Research Skills Authentically

We didn't want to employ a didactic teaching approach to introduce students to research skills; we wanted to challenge the students, stimulate their engagement and motivate their learning. To achieve this aim, we designed a program around the exploration of a topical issue that would be relevant to nursing students. The topic we selected reflected legal and ethical dilemmas that nurses might encounter in the workplace. We used a blog post as an initial hook to foster and stimulate students'

interest and participation in the session. Making the subject matter relatable motivated them to engage with and converse about the research process. This activity also helped to illustrate to students that research has a critical role in solving everyday problems encountered in the nursing profession. We used relatable problem-solving activities as it has been noted by Benander (2018) that this teaching approach assists students to transfer skills to future research in their field. Enhancing students' ability to do this was a key aim of our program.

12.3.3   Program Planning and Outline

The RSD framework was used to structure our skill development program. We started by using the RSD framework as a way to assess how the previous programs had addressed research skills. We did this by aligning the skills taught in the earlier program with the research skills or facets of research outlined in the RSD framework; this revealed gaps in the way we presented the skills required for research. We also referred to the RSD framework's learning continuum—the Scope for Student Autonomy and considered how independently students undertaking the program seemed to be able to apply each research skill. This helped us to pinpoint where we expected our cohort to be on the Scope for Student Autonomy in order to successfully complete a Masters degree. As a result, this enabled us to pitch the research skills program at an appropriate level for this cohort.

On the first day of the program, students were provided with a general overview of the research process. When we designed this activity, we mapped it to the third facet of the RSD framework, *Evaluate and Reflect*. We selected this facet as an initial focus to encourage students to think broadly and evaluate the strengths of non-academic sources. To begin, students worked in pairs or small groups to read through a blog article, written by a practicing nurse, about the use of social media by nursing professionals. Students then answered a series of questions that required them to reflect on the legal and ethical issues raised by the author and share their responses with the rest of the class. This activity was expanded with a task requiring students to engage in a deeper analysis of the article and to further reflect on the significance of the underlying issues and to consider what implications these issues might have in the context of a nursing practitioner. The activity was designed to build students' confidence and ability to question an issue and see how these skills relate to posing researchable questions in their future nursing careers.

Students were then introduced to skills associated with the *Embark and Clarify* facet, including how to develop a research question around the blog issues they had reflected upon earlier. This approach allowed us to demonstrate to the students the diversity and breadth of research topics that can be generated and the importance of refining or narrowing a research topic into a manageable research question.

This process took advantage of the recursive nature of facets of the RSD framework. We intended that the order of the activities would highlight the nonlinear nature of research, as, in order to begin research (*Embark and Clarify)*, students needed to
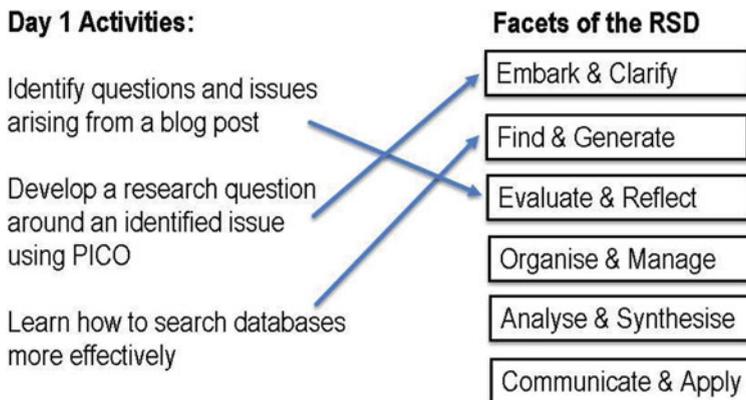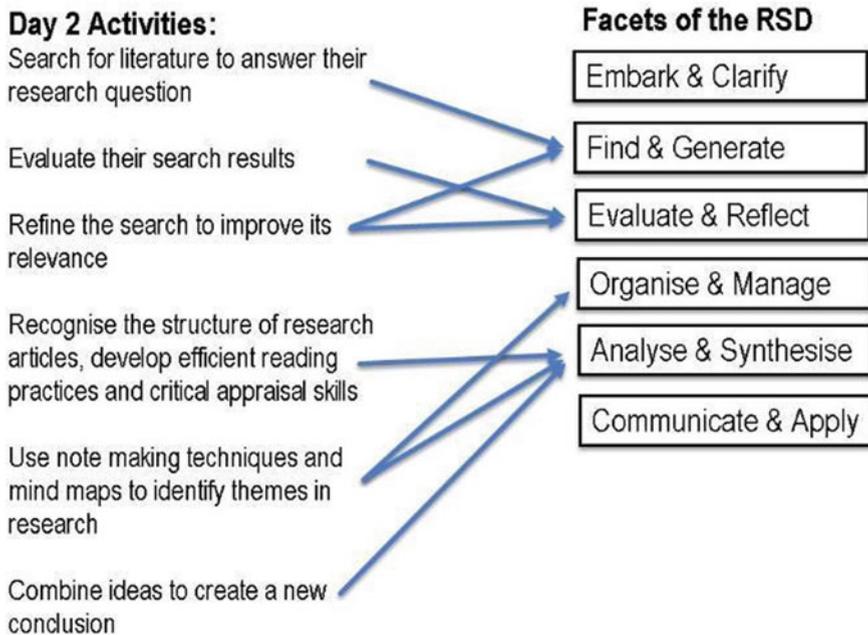
Fig. 12.1 In this diagram, the activities of Day 1, in the order in which they are undertaken by students, are mapped to the facets of the RSD as they appear on the framework

first *Evaluate and Reflect* (see Fig. 12.1). Our program design and activities, therefore, mirror a significant characteristic of the RSD framework, as although it presents research skills in a linear sequence to capture how research skills logically progress from one skill to the next, and the framework also recognizes that research is not a linear process, and that research can be messy as research skills overlap (Willison & O'Regan, 2007). Furthermore, we found that *Evaluate and Reflect* was a logical place to introduce research skills as this particular activity required a greater emphasis and focus on this skill set.

To help students develop their research questions, the Subject Librarian demonstrated the search framework PICO, a mnemonic common to nursing and other health fields and an important element of evidence-based practice (EBP) (Straus et al., 2019), to show how it is used to structure an effective search for evidence on their topic. The focus on EBP was chosen to highlight the ongoing relevance of research for these students in their future careers. The use of PICO paved the way for the introduction of the RSD's *Find and Generate* facet through a live demonstration of database search techniques. Students were expected to apply the skills covered in the session as homework by locating journal articles relevant to the research question they developed in the session. This provided an opportunity to consolidate their understanding through practical application.

The second day of the program was built on the research skills developed in the first session. Students began by demonstrating how they *Find and Generate* information, by applying searching skills at the scaffolded level to locate one journal article in the CINAHL Plus database. During this process, students were encouraged to apply skills related to *Evaluate and Reflect*, to help them refine their search strategy to find more articles of relevance on the topic. Moving between the Skill Facets of *Find and Generate* and *Evaluate and Reflect*, further highlighted the nonlinear nature of the research process (see Fig. 12.2).

Fig. 12.2 In this diagram, the activities of Day 2, in the order in which they are undertaken by students, are mapped to the facets of the RSD as they appear on the framework

Analyse and Synthesise skills were introduced as critical components of EBP and developed through a thorough examination of efficient reading practices. This starts with the identification of the common structure of research articles (IMRAD: Introduction, Method, Results, and Discussion) and the types of information they can expect to find in each of these sections. Students applied this new knowledge to the article they had found. In a similar way, the concept of critical appraisal was introduced, with an emphasis on the concept of bias and its potential impact on research outcomes. The use of critical appraisal tools, such as CASP checklists, was demonstrated as a means of approaching critical appraisal of research.

Once the students were familiar with approaches to literature appraisal, they were more receptive to a discussion of the benefits and drawbacks of different note-making techniques. At this point, we introduced the skills related to *Organise and Manage* in the RSD framework. To *Organise and Manage*, students were introduced to different ways of organizing ideas, i.e. mind maps, to identify common themes arising from the research they were reading. While engaged in activities to *Organise and Manage* their ideas coming from the literature, students were also moving seamlessly into the skills associated with the *Analyse and Synthesise* facet, as they began combining ideas to create new understandings and draw conclusions. Applying skills associated with *Analyse and Synthesise* was further consolidated through quizzes and assigned homework activities.
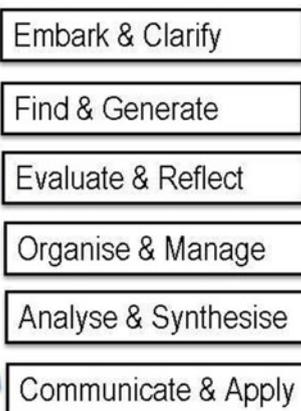
The final day of the program concentrated on the skills associated with the *Communicate and Apply* facet, through the library's Academic Integrity Module. We also included a discussion of the ethical considerations underpinning research so that students understood the principles behind citing and referencing before they were shown how to format references using APA 6th referencing style. Although the program did not include advanced EndNote instruction for citing and referencing, students developed an appreciation of the importance of this tool to *Organise and Manage* their references. They were encouraged to take control of their learning by undertaking relevant self-directed tutorials and workshops offered by the library to learn this academic skill.

Students then explored the structure, language and the approaches needed to communicate their research using their own academic voice in the different assignment types they would encounter in their degree, such as in case reports, essays, annotated bibliographies, literature reviews and reflective writing. This was followed by an opportunity to work in pairs to write a reflective piece that discussed any preconceived ideas about the university, what they learned in the program and how they felt it would impact their ongoing study. Reflections were then submitted to Moodle (the University's learning management system) in order to simulate the assessment experience. This activity not only demonstrated their ability to use the skills related to *Evaluate and Reflect*, and *Communicate and Apply* (see Fig. 12.3), but also encouraged students to independently evaluate their engagement with the research process, and develop the capacity to undertake self-directed research, which moved them

Day 3 Activities:

Discuss ethical considerations underpinning research

Develop an appreciation of the importance of reference management software

Explore the structure, language and approaches needed to communicate research in different genres

Write a reflection on the program and how it will impact on their capacity to undertake future research

Facets of the RSD

Embark & Clarify

Find & Generate

Evaluate & Reflect

Organise & Manage

Analyse & Synthesise

Communicate & Apply

Fig. 12.3 In this diagram, the activities of Day 3, in the order in which they are undertaken by students, are mapped to the facets of the RSD as they appear on the framework

along the RSD's Scope for Student Autonomy or learning continuum toward greater self-reliance.

12.3.4   Assessing the Program

Following each iteration of the program, student feedback and reflection were used to improve and fine-tune the sessions. At the end of the third session, following the submission of the reflective writing activity, students were asked to complete a short questionnaire, including both Likert scale questions and free-text responses (see Appendix A within this chapter), to provide feedback on the program and their learning. The inclusion of student responses and their submitted written reflections in this chapter has been approved by the Monash University Human Research Ethics Committee (MUHREC, Project ID: 18,548). Student responses also inform the discussion related to the program's outcomes and our reflections.

12.4   Outcomes

This program has run every semester for over three years. During this time, students have provided positive feedback in relation to the program, with 51.7% rating it as 'excellent' and a further 41.4% rating it as 'good'. Their recognition of the key role the program played in developing research skills was also reinforced in their reflections, with one student commenting that:

> At first, I did not plan to attend the program because I [had learnt] research skills from my previous university. But since the first training day, I have realized there are [many] differences and there [is] some knowledge that is quite new to me.

Another student felt that the program made a key contribution to their learning experience, noting that it provided an 'effective and necessary learning tool to begin my Masters of Nursing Practice course'.

Student reflections acknowledged a lack of experience in engaging with research prior to undertaking postgraduate study. In some cases, this happened as a result of limited exposure to research practices:

> [I] had not engaged much in research-associated learning in [my] undergraduate studies, and if [I] did, it varied a lot from what was expected academically in Monash.

Many students attending the program were returning to study after a significant period of time away, with one noting that it was 'really useful as we have been away from academic writing and research for more than five years' and was 'a great exercise to refresh our minds'. This aligned with our initial observations of the cohort.

One of the significant outcomes of the program was an improvement in student confidence. When asked if the program improved confidence in engaging with
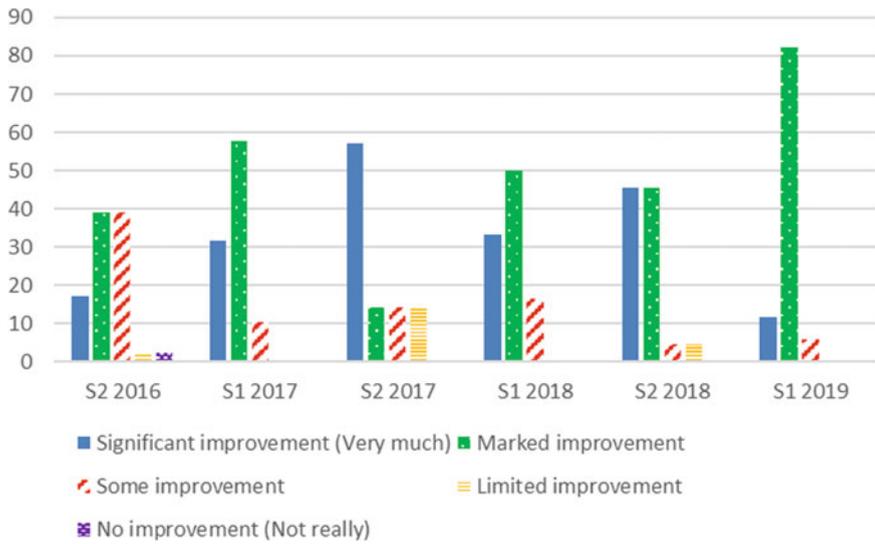
Fig. 12.4 Student responses to Question 5 'Did the orientation improve your confidence in engaging with research?' as a percentage of total responses

research, 81% of students indicated a marked improvement (see Fig. 12.4). This is further highlighted in comments such as the program 'prepared us in terms of how to do research and write assignments'. From the library staff perspective, this preparedness, or confidence, translated into an increased level of autonomy, resulting in a reduction in requests for assistance from library staff, including a significant decrease in library 'drop-in' figures (see Fig. 12.5). Not only did students feel more confident to undertake their research but their reflections indicated they were more
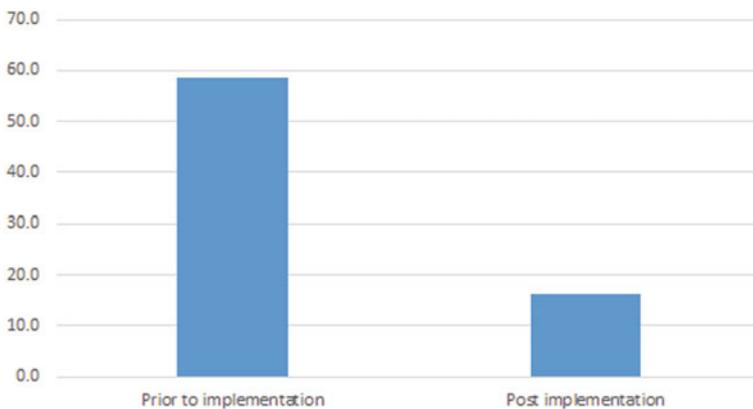
Fig. 12.5 Percentage of enrolled cohort attending library 'drop-in' sessions per semester

aware of their own research capabilities. Students were able to identify their skill gaps, as well as recognize which skills required further development so that they could be applied with greater independence. For example, one student commented 'I think more self-practice is required to select proper keywords for search strategy'.

By mapping the orientation program to the RSD framework, we were able to provide students with a clearer understanding of research as an interconnected process. Students were able to identify the steps of the research process, commenting that the program gave, 'us an idea of what research is all about and how one systematically goes through each step'. Student reflections acknowledged increased knowledge of what was involved in researching with one student reflecting on their previous learning in this area, noting that '[they] have learnt this knowledge from [their] previous university but the knowledge [they]'ve acquired during [the] last three days is broader and clearer'.

We also found the Facets of Researching the RSD framework provided an excellent lens for analyzing students' open-text responses on their perceptions of their skill development and reflections on the value of the program. Analysis of student responses in the questionnaire indicates that the *Find and Generate* facet was both highly useful and the area where they experienced the most improvement in their understanding (see Fig. 12.6). Student reflections demonstrated improved skill development and autonomy, which increased their confidence in their ability to navigate the quantity of literature required at their level of academic study, through the use of appropriate databases as well as improved capacity to develop a more effective search strategy.
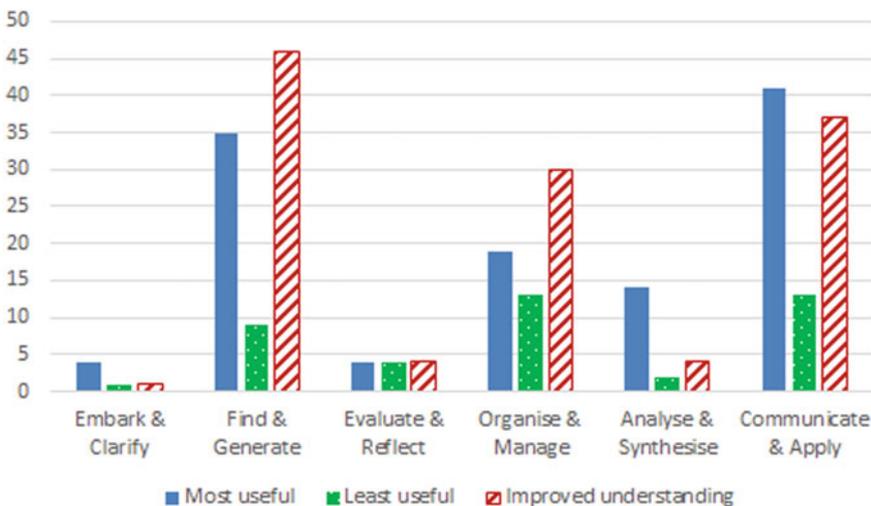
Fig. 12.6 Student indication of the usefulness of the program by RSD facet in questionnaire responses

Analysis of student responses did not indicate that they found *Analyse and Synthesise* as useful or indicate an improved understanding in this facet in the questionnaire responses. However, in the free-text reflections, students commented on aspects of this facet as frequently as they commented on *Find and Generate* skills. Their comments demonstrate a grasp of the importance of critical thinking and analysis in reading research as well as a recognition of commonly used structures, such as IMRAD.

Student perceptions of improved abilities in *Communicate and Apply* indicate a growing ability to develop their own academic voice. One student reflected that, as a result of the program, they had 'broaden[ed] my knowledge relating to … different types of academic writing'. Reflections further indicate increased awareness of the need to address any ethical standards underpinning their research.

12.5   The RSD as a Pedagogical Tool

The RSD framework provided us with a conceptual model describing the research process which provided guidance for skill sequencing in our program design. As a result, we were able to effectively highlight the nonlinear nature of the research process in our learning activities.

While students found the whole program valuable, analysis of their questionnaire responses and submitted and free-text reflections reveal that they did not value all of the facets equally. This may reflect their level of autonomy to undertake different Skill Facets. While all of the facets of the research process would be considered important, these students appeared to place more value on those facets with which they had previous experience, possibly because they understood this skill set more. However, the program did enable students to develop their skills in less familiar facets. For example, while *Evaluate and Reflect* did not rate as useful in the questionnaire, students could see the importance of these skills in the context of the reflective exercise. This may suggest that *Evaluate and Reflect* remains an inherent and subconscious process that is difficult to conceptualize and articulate for these students.

A mismatch in results from the questionnaire and free-text responses interested us as educators and made us question whether we had used the terminology related to research explicitly enough in our teaching to make the skills of *Analyse and Synthesise* and *Evaluate and Reflect* overt to students. The importance of bringing the research skills closer to the student vernacular has been noted in research undertaken by Torres (2018) using the RSD framework with first-year biology students. This study showed a marked contrast in students demonstrating a higher level of autonomy when research skills were explicitly articulated by the educator, in comparison to reduced levels of student autonomy when there was a lack of research-related terminology used in the classroom, particularly in regard to the skills of *Analyse and Synthesise*. Therefore, enhancing students' conceptualization of what the skills of analysis and synthesis, evaluation and reflection entail might be improved by using

research-related terminology more explicitly in our teaching. This is something we will look to address in future programs.

While we used a relatable issue in our opening learning activity as a hook for student engagement, students still continued to question the relevance of research to their future nursing careers. It is unclear if this is due to low levels of autonomy (and that they are novices to research) or a lack of understanding of the importance of research to clinical practice. One solution would be to deepen and connect the relevance of research to practice for registered nurses by highlighting that a number of their professional standards explicitly refer to research skills (Nursing & Midwifery Board of Australia, 2016).

We also found that the RSD framework offered us an effective tool that allowed us to design a comprehensive skill development program within the constraints of a three-day program. In addition, using the RSD framework as an analytical lens to evaluate student reflections helped us identify knowledge gaps and approaches we could address in future iterations of the program. We strongly believe that the program we created and describe here provides a model that can be adapted for other student orientation programs focused on developing students' research skills and progressing student autonomy.

Appendix

Student Feedback Questions

On a Scale of 1 (Poor) to 5 (Excellent), What is Your Assessment of the Orientation Program as a Whole?

(Poor) (1).

(2).

(3).

(4).

(Excellent) (5).

On a Scale of 1 (Unclear) to 5 (Very Clear), What is Your Assessment of the Clarity of Presentations?

(Unclear) (1).

(2).

(3).

(4).

(Very clear) (5).

What Aspect of the Orientation Did You Find Most Useful? (Open Text)

What Aspect of the Orientation Did You Find Least Useful? (Open Text)

Did the Orientation Improve Your Confidence in Engaging with Research?

(Not really) (1).

(2).

(3).

(4).

(Very much) (5).

Did the Orientation Improve Your Knowledge of Available Research Tools and Resources?

(Not really) (1).

(2).

(3).

(4).

(Very much) (5).

Name at Least One New Thing You Learned During the Orientation. (Open Text)

Do You Know Where to Find the Nursing & Midwifery Library Guide?

Yes (1).

Maybe (2).

No (3).

Are You Confident in Your Ability to Identify Keywords from Your Research Topic and Develop a Search Strategy Using AND/OR/NOT?

Yes (1).

Maybe (2).

No (3).

Do You Understand the Difference Between the Kinds of Information Found in Google and the Library Databases?

Yes (1).

Maybe (2).

No (3).

Do You Know What Peer Review Means?

Yes (1).

Maybe (2).

No (3).

What is the Difference Between Author-Prominent and Content-Prominent In-Text Referencing? (Open Text)

Which of the Following Statements Contains an Element of Evaluation?

Jones explains the reason why he did the experiment, details his methodology and then presents the results of his study. (1).

Jones' analysis of the effectiveness of intravenal delivery of DDT uses a mixed-method approach. (2).

The mixed-method approach to assessing the effectiveness of intravenal delivery of DDT applied by Jones successfully resolves many of the issues faced by previous researchers. (3).

Jones failed in his experiment. (4).

Any Additional Comments, Suggestions, or Observations? (Open Text)

References

Benander, R. (2018, November). *Future of education and skills 2030: Conceptual learning framework: a literature summary for research on the transfer of learning.* Organisation for Economic Co-operation and Development. Retrieved from http://www.oecd.org/education/2030/A-Literature-Summary-for-Research-on-the-Transfer-of-Learning.pdf.

Gyuris, E. (2018). Evaluating the effectiveness of postgraduate research skills training and its alignment with the Research Skill Development framework. *Journal of University Teaching & Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/5.

Hamlin, G., Kinash, S., Crane, L., Bannatyne, A., Judd, M-M., Stark, A., Eckersley, B., Partridge, H., & Udas, K. (2016). *National research on the postgraduate student experience: Case presentation on the first year postgraduate student experience* (volume 1 of 3). Canberra, ACT: Australian Department of Education and Training.

Hays, A. M., & Sharp, S. (2018). Supporting postgraduate coursework students through their time of transition. *International Studies in Widening Participation, 5*(2), 40–54. https://ro.ecu.edu.au/ecuworkspost2013/5746.

Nursing and Midwifery Board of Australia. (2016). *Registered nurse standards for practice.* Retrieved from https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards/registered-nurse-standards-for-practice.aspx.

Stagg, A., & Kimmins, L. (2014). First year in higher education (FYHE) and the coursework post-graduate student. *The Journal of Academic Librarianship, 40*(2), 142–151.

Straus, S. E., Glasziou, P., Richardson, W. S., & Haynes, R. B. (2019). *Evidence-based medicine: How to practice and teach EBM* (5th ed.). Edinburgh.

Taib, A. (2018, July 8–11). *The MARS model—enabling coursework students to attain academic, research and professional skills from orientation to graduation.* [Paper presentation]. *STARS,* Auckland, New Zealand. https://unistars.org/papers/STARS2018/06C.pdf.

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council on Undergraduate Research, 37*(1), 26–33. https://doi.org/10.18833/curq/37/1/9.

Torres, L. (2018). Research skills in the first year biology practical—Are they there? *Journal of University Learning and Teaching Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/3.

Willison, J., Sabir, F., & Thomas, J. (2017). Shifting dimensions of autonomy in students' research and employment. *Higher Education Research & Development, 36*(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216.

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: A framework for students becoming researchers. *Higher Education Research & Development, 26*(4), 393–409. https://doi.org/10.1080/07294360701658609.

Willison, J., & O'Regan, K. (2006, 2018). Research Skill Development framework. Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf.

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Chapter 13
The Conceptual as Visual: Using Visual Reinforcement to Make Research Processes Explicit

Romany Manuell

Abstract Visual reinforcement of abstract concepts can improve learning experiences for adult learners and learners of English and acts as motivation for learning. The Research Skill Development (RSD) framework lends itself to deconstruction and colour-coding, providing students with clear visual indicators of learning outcomes and levels of attainment. The elements of the framework can be transformed into graphics to make it explicit to students that research is an iterative process, encompassing creative practice as well as information research. This approach has been used in the creation of research skill development resources for students and academics in the Faculty of Art, Design and Architecture at Monash University (MADA).

13.1 Introduction

The teaching of art and design theory and practice has been a continuing focus for Monash University. The Faculty of Art, Design and Architecture (MADA) has a close relationship with Monash University Library. Over the years, the library has developed a rich collection of information resources, supported by a suite of research and learning skills programmes, tailored to students and academics studying and working in studio arts and theory courses. Blended learning has allowed the MADA faculty to maximise the time spent in face-to-face studios and has created opportunities for asynchronous and just-in-time training for those skills able to be taught online. The library has been able to integrate research skills development into the faculty's offering of both online and face-to-face education for students in art and design disciplines.

In art and design education, it is understood that it is sometimes difficult for students to conceptually integrate art theory and practice, especially when these areas are taught as separate subjects (Rintoul, 2014; Rintoul & James, 2017). In the same way, it is sometimes difficult for students to conceive of research as a process that includes information seeking, as well as the creation of artwork and designs.

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Authors such as Bennett (2006 p. 38) suggest that studio art and architecture students often 'do not regard the library as logically fitting into their studio projects or course work, and as a result do not recognise their own valid and extremely challenging research needs'. To address this challenge, the Research Skill Development (RSD) framework (Willison & O'Regan, 2006, 2018), a conceptual model outlining a developmental approach to acquiring skills for research, was applied to underpin a novel and engaging approach that introduced students to the research process appropriate to the visual realm. The beauty of the RSD framework is its flexibility. This was demonstrated in the way it adapted to the visual realm. By reaching visual design students through a visual format, the research process acquired meaning. Students were further motivated to learn as they could identify where their skills were placed along the autonomy continuum. By using the RSD framework as a visual aid, students learned to understand the research process as an iterative and integrative practice.

In order to support educators in the teaching of art and design theory and practice, MADA implemented a new project, which was the site of our visual branding based on the RSD framework. The aim of the project (commonly known as the Unit Enhancement Project) was to create online educational resources. The project was led by the MADA Associate Dean (Education), with assistance from a team of educational designers, graphic designers and library staff, including librarians and learning skills advisers. This project resulted in the creation of a website that could be used by lecturers as a repository of video, audio and textual resources, and reused in various areas of the Learning Management System. In each of the library's creations for this platform, repeated elements of the RSD framework acted as a 'brand' that could be replicated in face-to-face workshops, and added to offline resources to encourage students to recognise research as a process, and to encourage engagement with each of the research skills articulated in the framework.

13.2 Rationale

13.2.1 Visual Reinforcement for Motivation and Understanding

Interest Theory is based on the idea that learners will be intrinsically motivated by their interest in a particular activity, leading to greater attention to (and memory of) subject content (Krapp, 2002). As students in art disciplines are immersed in the world of design, the transformation of the RSD framework into a series of visual elements can be expected to appeal to their interests. Embedding research skills within timetabled art and design classes can also leverage students' interests towards motivation to learn, and this also occurs in the MADA faculty through embedded classes delivered by the library. However, clarification of abstract concepts through visual aids also assists students' understanding. In the biological sciences, animations have been used to explain abstract concepts (Hall, 1996), while in library classrooms,

Charles (2018) recommends using images and graphics for clarity and interest. The structure of the RSD as a series of facets lends itself to transformation into images or graphics which will represent and reinforce the elements of the research process.

13.2.2 Visual Reinforcement for Language Acquisition

In some MADA courses, international students make up 40 per cent of the cohort, and many of these students speak languages other than English (Monash University, 2019). Visual reinforcement has been used in language education to assist students to develop understandings of abstract concepts (Paivio, 1971). Approaches to visual reinforcement have ranged from analogue formats such as overhead projection and hand-drawn images (Yunus, 1981) to screencasting (Harper et al., 2018). For the library, reinforcing the elements of the research process with images and icons can make the abstract nature of research easier to understand and remember for international and local students alike.

13.2.3 Visual Reinforcement of the Integration of Research and Practice

For art and design students, it can be challenging to recognise that the research process integrates research skills and creative practice. In a project to uncover the needs of artists and designers at Hong Kong Design Institute (HKDI), Lo and Chu (2015) surveyed more than 300 students. Like other students, HKDI art and design students expressed a need to find information for university assignments. However, the survey also uncovered a need for both concrete and abstract sources of inspiration, career advice and development and networking opportunities with other artists and designers (Lo & Chu, 2015). Undertaking research is an essential part of becoming an art practitioner. In order to motivate students to grasp this concept and integrate their research and practice, the RSD framework can be broken into its facets and used as graphical reminders in online learning objects and in face-to-face activities.

13.3 Visually Branding Research Skills Teaching

13.3.1 Creating Visually Branded Videos

The library created a series of skill development videos to support librarians and learning skills advisers in delivering skill-related content online. A graphic designer advised on how to visually brand the videos with recurring graphics based on the
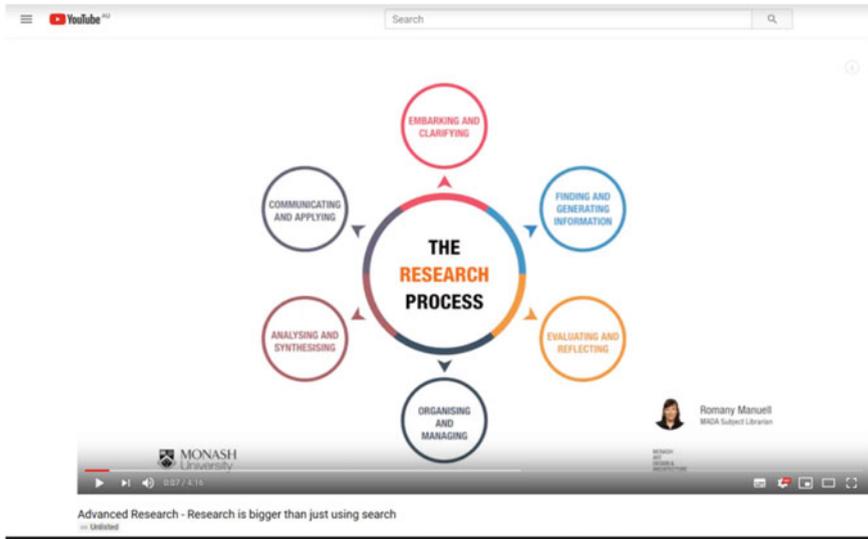
Fig. 13.1 Screenshot of the branding used in the project, used with permission

RSD framework, which gave the videos a consistent look and feel. Videos could be copied or linked from the repository and reused in the Learning Management System at appropriate times during semester. As the librarians and learning skills advisers presented a session on research skills, the facets of the RSD framework would appear on the screen behind them, and the appropriate facet would be highlighted, depending on the skill being discussed.

This content would then be interspersed with screen-capture videos and additional visual elements (e.g. titles and chyron graphics). The video material created by the library included introductory information on library services (branded with the RSD graphic highlighting the *Embark and Clarify* facet) and more complex material to develop searching skills using the tools of the library (branded with the RSD graphic highlighting the *Find and Generate* facet) (see Fig. 13.1).

13.3.2 Integrating Research into Creative Practice

In previous library–faculty teaching collaborations, the library's skill development sessions were usually presented separately to content, which divided the skills related to researching from the skills associated with creativity. In the Unit Enhancement Project, the videos and supplementary materials created by the library were included in the online repository alongside studio-focussed information. Library videos appeared next to skills related to orthogonal drawing, work skills (e.g. portfolio preparation) and soft skills (e.g. overcoming creative blocks). The integration

of research skills alongside other skills for art and design practitioners aimed to emphasise research skills as an integral part of creative practice. Just as the videos were delivered as skills essential to art and design practice, the embedding of face-to-face classes within studio classes further reinforced this seamless approach. The integration of research skill videos and classes into the art and design curriculum made the library a part of the day-to-day life of the practising artist and designer.

13.3.3 Reinforcing the Visual Elements in Face-To-Face Classes

The librarians and learning skills advisers used the graphics produced by the Unit Enhancement Project in associated face-to-face classes. In the Faculty of Art, Design and Architecture, classes are embedded so that students meet library staff at several points along their learning journey. Although the students follow different streams (fine art, art history, architecture and various design programmes including industrial design, communication design and spatial design), the skills delivered by the library always make use of the RSD framework. The branded features used in the online materials were included on PowerPoint slides used on the screens in workshops and replicated on handouts. For example, in an Information Research Planner document, the design elements appeared on the top right-hand corner of each page, guiding students through embarking, to finding and analysing (Fig. 13.2). In this way, students learn to recognise each of the elements of the research process via a visual aid. Although placing the facets of the framework on the PowerPoint slides and handouts seems to pin down the stages of research to a particular order, educators made sure to emphasise that these stages are not rigid. The process is iterative, and as such, students were encouraged to move flexibly between the stages of the process, moving seamlessly, back and forth between stages of communicating (via creative outputs) and finding information (using library materials).

13.3.4 Lesson Planning with the RSD Framework

The RSD framework was also used as a lesson planning tool. Successful classes have a number of stages. Classes should have clear learning intentions and goals, a structure that provides an outline for the class and explicit teaching practices that make it clear to students what they should be learning and what success looks like (State of Victoria, Department of Education and Training 2017). The RSD framework helped to plan the face-to-face classes, as well as the videos, and informed the way learning outcomes were written. Learning outcomes for students, units and courses were mapped to the various stages of the lesson, providing a clear structure for classes and videos. Using the RSD framework as the basis of a series of educational
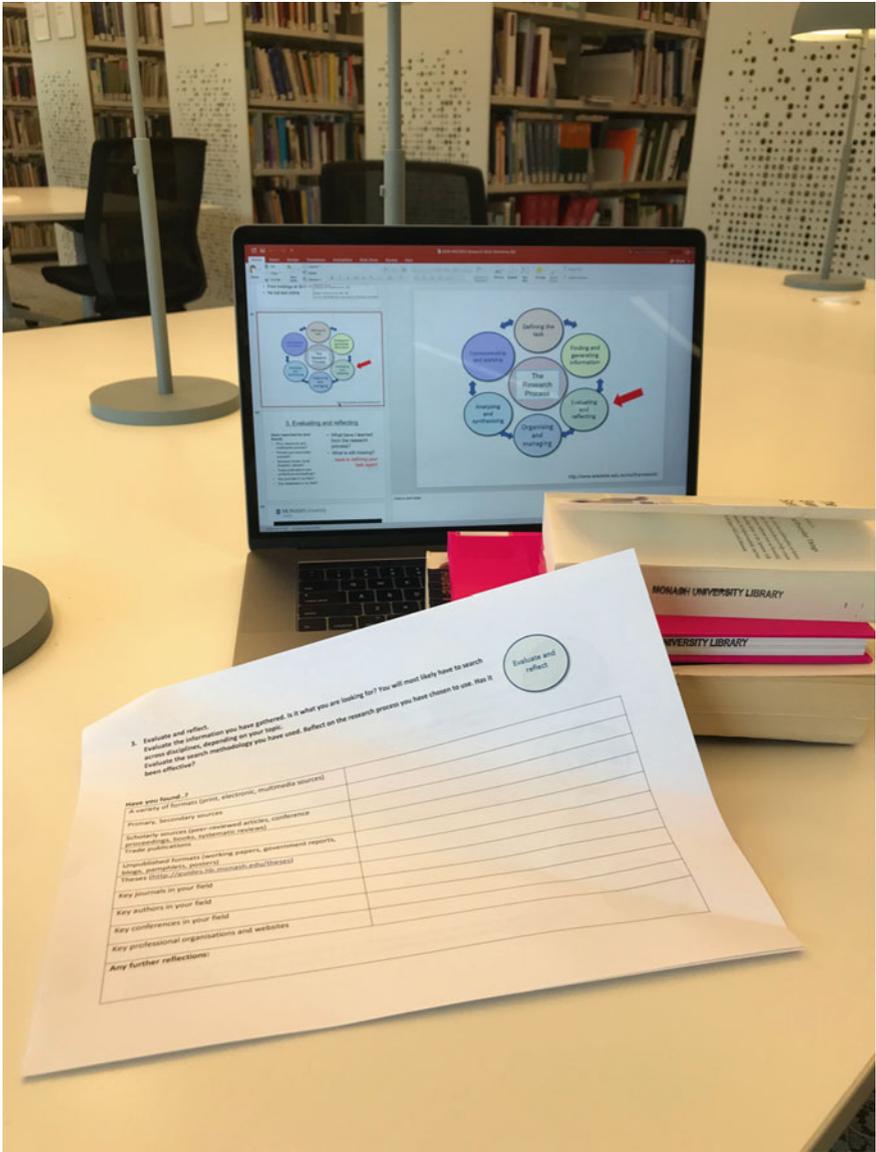
Fig. 13.2 An example of branding on an Information Research Planner document, and corresponding slides

experiences allowed the educators to flag parts of the research process that were included and omitted in videos and classes, ensuring the research process could be addressed systematically and holistically over the entirety of the project.

13.4   Outcomes

13.4.1   The Creation of the Online Repository

The MADA Faculty Unit Enhancement Project resulted in the creation of a website that could be used by faculty as a repository of video, audio and textual resources, and reused in various areas of the Learning Management System. The website was at first only available for MADA staff, but later became publicly accessible. The learning objects created by the library made use of repeated elements of the RSD framework as a 'brand' to encourage students to recognise research as a process, and to encourage engagement with each of the research skills articulated in the framework. Available via the intranet to Monash University staff, the repository has remained relevant and viable over the years in spite of changes to its design, digital platform, learning content and the transient nature of academic and faculty staff moving in and out of the project and the university. The repository is still used as an active clearing house for skill development resources which continue to be embedded in a variety of subjects. This is evidenced anecdotally by students as they often say to the librarians, 'I recognise you from that video in Moodle [learning management system]!', suggesting that the learning objects still hold relevance as they continue to be embedded in student learning content.

13.4.2   Strengthening Relationships Between MADA Faculty and the Library

A significant outcome of the project has been a stronger educational partnership between the library and the faculty which has benefited student learning. Participation in the Unit Enhancement Project occurred at a time when there had been a pause in the attendance of library staff at MADA faculty meetings. The successful completion of this project strengthened trust between the library and the faculty, leading to greater liaison between the two areas of the University. The relationship has promoted the library's research and learning contribution to student learning, providing a way for research skills to become further integrated into curriculum. Since the completion of the Unit Enhancement Project, the library has been given a standing item on the MADA Education Committee, alongside the education designer for the faculty, and as such, the library is better able to report on other education and research projects, and provide learning advice at a strategic level. Using the RSD framework as a

pedagogical tool helped build librarians' confidence as educators, and has made it clear to the faculty what the library is able to offer student learning in terms of research and learning skill development.

13.4.3 Making Research Skills Visible to Students

Repeated exposure to the Skill Facets of the RSD framework through visual reinforcement supported students' familiarity and awareness of research-related terminology. This understanding is critical for students to become aware of themselves as learners and to see how research skills fit into the practice of art and design. The significance of the RSD framework in enabling this learning through familiarisation with the language associated with research skills via visual reinforcement is significant as librarians at Monash University Library have noted that students are often unclear and have difficulty expressing where they need help with their research assignments. Becoming more cognisant of what research skills involve and where students are in terms of the research process can assist students in becoming more confident learners (Kimmins & Stagg, 2009).

13.5 Ideas for Future Research

Greater familiarisation with the RSD framework could therefore offer students a language to pinpoint and express where they might need learning support, the RSD effectively providing a lexicon to enhance communication between students and library staff. For example, students approaching the library's Research and Learning Point for assignment support often express their needs in general terms such as 'I need help with an assignment'. Imagining how this same question could be expressed through the familiar lens of the RSD framework might evoke a more targeted question such as 'I need help synthesising the ideas in this literature review'. This would indicate a greater awareness of research skills and the research process, and would improve how library staff interpret and meet student learning needs. A further exploration of the potential of RSD framework in this context may be a fruitful avenue for future empirical research.

13.6   Reflections on the Initiative

13.6.1   Adapting the RSD Framework for Visual Learners

The versatility of the RSD framework was demonstrated in the way that it could be interpreted and readily adapted for visual learners using symbols and terms appropriate to art and design. Although we brought the expertise of a graphic designer, education designer and website production manager to interpret how the RSD framework could be presented visually, we recognise that not everyone has these experts at hand. From our experience, adapting the RSD for visual reinforcement can be still achieved using simple shapes and words to convey the facets of the framework, and the names of each of the facets can be adapted to the language of the cohort.

For example, *Embark and Clarify* can be changed to 'beginning your assignment'. PowerPoint and Microsoft Word can be used to create simple and reusable design elements. Learning from the often-cited work of Henderson and Cote (1998) on logo design, the project used curved and symmetrical shapes of moderate complexity. We chose a consistent colour scheme (the rainbow colour scheme of the original RSD framework) and repeated these design elements across all learning materials, and all learning settings. Since the inception of the Unit Enhancement Project and the creation of the resultant website, the interfaces of the library website and search system have changed multiple times, resulting in learning resources needing to be updated or entirely recreated. The RSD framework has remained applicable throughout these changes, strongly suggesting its longevity and applicability long into the future.

13.6.2   Integrating Research and Practice

When the creation of ideas and artefacts is at the forefront of students' minds, art and design history, theory and research can sometimes be pushed to one side. The issue of integrating art and design theory and practice has been discussed at length by authors advocating for a curriculum that combines these areas of study (Rintoul, 2014; Rintoul & James, 2017). Other authors have promoted the idea of practice-led research, where knowledge is created *through* making, and the artefact produced becomes the answer to a particular research question (Mäkelä, 2007; Smith & Dean, 2009). A benefit of the RSD framework is that it allows for both approaches and offers a tangible solution to the problem of leading students to see the multiple connections between theory and practice. Within the broad facet of 'communication', the creation of an artwork or design project is recognised as the application of practical and theoretical information collected in earlier stages of the research process. In the case of practice-led research, 'finding and generating' information may also include the artistic creation itself, rather than through traditional library conceptualisations of what research entails. Dissolving the boundaries between research and practice

can bring new understandings of art, as well as bringing new understandings of knowledge to the academic community (Arnold, 2012). Using the RSD framework as a logical structure can make this process visually explicit to students.

13.6.3 The RSD as a Tool to Guide Collaboration

Finally, using the RSD framework as a visual reference has guided students and faculty staff to see how skills for research are entwined with skills for learning, and in doing so has demystified understandings of the skill repertoire that library staff teach. At Monash University Library, librarians and learning skills advisers are co-located and team-teach research skills collaboratively (Smith, 2011). Each member of this partnership has a complementary role in teaching the various skills articulated in the RSD framework. By underpinning teaching collaborations between librarians and learning skills advisers with the RSD framework, both groups of educators have a way to identify how the skills they teach fit into the research process. Using a common language assists in communicating to art and design students and practitioners what research skills encompass. This guides a holistic response to developing students' research skill development. The RSD framework provides a basis for this relationship between the librarian and learning skills adviser, and allows the students to see the partnership as a seamless experience of professional advice integrated into their curriculum and creative practice. It is not necessary to know who to turn to for help in the library, because we are all part of the RSD framework.

References

Arnold, J. (2012). Practice led research: Creative activity, academic debate, and intellectual rigour. *Higher Education Studies, 2*(2), 9–24.

Bennett, H. (2006). Bringing the studio into the library: Addressing the research needs of studio art and architecture students. *Art Documentation: Journal of the Art Libraries Society of North America, 25*(1), 38–42.

Charles, L.H. (2018). In service to Rutgers University Libraries' instruction program: LIS students gain instruction experience through a mutually beneficial collaboration. In T. McDevitt & C.P. Finegan (Eds.), *Library service and learning: Empowering students, inspiring social responsibility and building community connections.* Chicago: Association of College and Research Libraries.

Hall, D. W. (1996). Computer-based animations in large-enrolment lectures: Visual reinforcement of biological concepts. *Journal of College Science Teaching, 25*(6), 421–425.

Harper, F., Green, H., & Fernandez-Toro, M. (2018). Using screencasts in the teaching of modern languages: Investigating the use of Jing® in feedback on written assignments. *Language Learning Journal, 46*(3), 277–292. https://doi.org/10.1080/09571736.2015.1061586

Henderson, P.W., & Cote, J.A. (1998). Guidelines for selecting or modifying logos. *Journal of Marketing, 62*(2), 14–30. https://doi.org/10.1177/002224299806200202

Krapp, A. (2002). An educational-psychological theory of interest and its relation to SDT. In E. Deci & R. M. Ryan (Eds.), *Handbook of Self-Determination Research* (pp. 405–427). Rochester: University of Rochester Press .

Kimmins, L., & Stagg, A. (2009, September 28–30). *Creating confidence: developing academic skills and information literacy behaviours to support the precepts of tertiary academic performance.* [Paper presentation]. The 4th Asia Pacific Conference on Educational Integrity (4APCEI), University of Wollongong, NSW, Australia.

Lo, P., & Chu, W. (2015). Information for Inspiration: Understanding information-seeking behaviour and library usage of students at the Hong Kong Design Institute. *Australian Academic & Research Libraries, 46*(2), 101–120. https://doi.org/10.1080/00048623.2015.1019604

Mäkelä, M. (2007). Knowing through making: The role of the artefact in practice-led research. *Knowledge, Technology & Policy, 20*(3), 157–163.

Monash University. (2019). *Student profile.* Retrieved from https://www.monash.edu/study/courses/admissions-transparency/student-profile?domestic=true

Paivio, A. (1971). *Imagery and verbal processes.* New York: Holt, Rinehart & Winston .

Rintoul, J. (2014). Theory and (in) practice: The problem of integration in art and design education. *International Journal of Art and Design Education, 33*(3), 345–354. https://doi.org/10.1111/jade.12064

Rintoul, J., & James, D. (2017). 'That tricky subject': The integration of contextual studies in pre-degree art and design education. *International Journal of Art & Design Education, 36*(2), 215–225. https://doi.org/10.1111/jade.12077

Smith, H., & Dean, R. T. (2009). *Practice-led Research, Research-led Practice in the Creative Arts: Research Methods for the Arts and Humanities.* Edinburgh: Edinburgh University Press .

Smith, L. (2011). Monash University Library and Learning: A new paradigm for a new age. *Australian Academic & Research Libraries, 42*(3), 246–263. https://doi.org/10.1080/00048623.2011.10722235

State of Victoria (Department of Education and Training) (2017). High impact teaching strategies: Excellence in teaching and learning. Retrieved from https://www.education.vic.gov.au/school/teachers/teachingresources/practice/improve/Pages/hits.aspx

Willison, J. & O'Regan, K. (2006, 2018). *Research Skill Development framework.* Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf

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Chapter 14
Learning to Learn: Developing Students' Research Skills in a Long-Term Collaboration Between Library and Faculty Damian Gleeson, Andrew Junor and Susan Mayson

Andrew Junor, Damian Gleeson, and Susan Mayson

Abstract Student engagement and success in higher education are dependent on high-quality learning experiences that meet the needs of diverse student cohorts. We describe how leveraging the expertise of library and academic staff through a sustained collaborative teaching partnership has motivated student learning. The collaboration involved designing and delivering a series of unit-specific, embedded academic skill development workshops for students completing a Management Master's unit. The workshops and the teaching collaboration were underpinned by the research skill development (RSD) framework and focused on the academic skills that students would require to complete the key assessment tasks. The RSD framework provided educators with a shared language and the means to articulate common learning objectives. The effectiveness of the RSD to guide the teaching partnership, inform the workshop design and increase student motivation for learning has been the key to sustaining the longevity and success of this collaboration.

14.1 Introduction

'I want to give my students skills to 'learn to learn'—to be able to move from description (of basic concepts) to critical application of concepts and theory to solve practical problems' (chief examiner in planning conversation with library colleagues at the beginning of the collaboration).

The above statement, or perhaps entreaty, became the launching point for a successful five-year collaboration involving the co-authors of this chapter. We are

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library-based learning skills advisers and a management discipline academic from the Faculty of Business and Economics working collaboratively. Our work together has also involved a subject librarian and a team of sessional teaching associates. This chapter reflects on our collaboration to equip students to 'learn to learn' in a postgraduate management unit. It was a core unit in the 'Managing Human Capital' specialisation in the Master of Business (coursework) degree at Monash University, Caulfield campus. The unit attracted approximately 250 students per year, the majority of whom were international students from diverse language and educational backgrounds. Since the unit's inception, the library-based staff (comprising two learning skills advisers and a subject librarian) have collaborated with the academic in order to address a perceived need for research and academic skill development pertaining to similar cohorts in the faculty. Our collaboration began with curriculum design conversations in the unit planning stages and moved into skill development and teaching support once students were enrolled in the unit.

As this student cohort is predominantly international students, they have limited familiarity and experience with the required academic conventions to enable their learning in a unit calling for academic research and English writing skills at the master's level.

In every semester during the collaboration, 90–97% of students enrolled in the unit originated from a country other than Australia (66–84% originated from East Asia, predominantly from China). Furthermore, 86–90% of students enrolled in the unit in this period had a primary language other than English. Having such an international student cohort is not unusual in a contemporary Australian university. As of April 2019, there were 359,554 international students enrolled in Australian higher education (Department of Education, 2019). It is well acknowledged that international students bring great cultural and social benefits to the classroom (Universities Australia 2018); however, teaching and learning challenges arise because these students often struggle with the academic demands of university study (Baik & Greig, 2009). Owing to these features of the student cohort, our collaboration primarily aimed to address the fact that students were starting out ill-prepared for the tasks expected of them in the unit, and more broadly in the course.

Based on previous experience with the course cohort, the academic responsible for this unit perceived two key areas in which the cohort needed particular support. Firstly, many students could be taught to complete an assessment task with strong scaffolding, examples or modelling, but had trouble seeing how the skills developed in one task could carry over and progress in their next task (Birzina et al., 2019; Eraut, 1994; Hung, 2013; Marini & Genereux, 1995). Secondly, many students lacked sufficient familiarity with the idea or practice of critical and creative scholarship. Producing 'critical and creative scholars' is one of Monash University's graduate attributes and a course outcome for the Master of Business degree (Monash University 2019a, b). Students in this cohort were not demonstrating the 'advanced and integrated understanding of a complex body of knowledge' and the ability to 'analyse critically, reflect on and synthesise complex information', nor the ability to 'research and apply established theories to a body of knowledge or practice'; that is, as categorised in the Australian Qualifications Framework level 9, with which the

course outcomes are aligned (Australian Government Department of Education & Training, 2019). In some units, this lack of skills critical for research would lead to lower grades, lower pass rates and lower student satisfaction. As a result of these known student challenges, the unit's chief examiner partnered with the library to make the required skills more explicit in the curriculum, and to support students in developing these skills as part of the original 'learning to learn' objective.

14.2   Rationale

To achieve the aim of improving the academic skills of students in a cohort with known challenges, we adopted the use of a conceptual model, the research skill development (RSD) framework (Willison & O'Regan, 2006, 2018). The RSD framework has proven effective for guiding curriculum and assessment design and for making the academic skills and processes involved in research explicit to students (Taib & Holden, 2013; Willison, 2018; Willison et al., 2009). The RSD framework was applied to guide curriculum and assessment in this unit. The success of our approach is evidenced in the continued use of the RSD over five years to underpin and guide collaboration in the unit between librarians, learning skills advisers and discipline academics. The approach reflects Monash University Library's partnership model where the RSD enables, informs and guides library–faculty collaboration for innovating curricula and addressing learning and teaching challenges (Monash University 2019c; Torres & Jansen, 2016).

We considered the RSD framework a suitable conceptual model for three main reasons. Firstly, it provided a means for making underlying research and academic skills in learning activities and assignment tasks more explicit to students. This in turn supported the goal of building students' critical thinking skills and the ability for students to structure a sound academic argument. Secondly, the RSD's learning continuum offered a way to build students' research and academic skills incrementally towards masters-level expectations, as the RSD describes how skills can be gradually scaffolded towards higher levels of student autonomy across tasks. Thirdly, the shared language provided by the RSD framework enabled us to collaborate with a clearer purpose and understanding of how to align our common pedagogical objectives. The RSD was therefore critical for enabling this third goal—enabling students to 'learn to learn'—particularly since the teaching partnership was between educators bringing different areas of expertise to the learning space.

One of the main challenges with this cohort was that they could perform adequately in response to individual tasks, but were not recognising and building the underlying academic skills commonly used across different tasks (in other words, they were not transferring skills effectively). For example, students might perceive an individual essay, a group written report and a group oral presentation as separate deliverables in different formats. This would be accurate, but overlooked the fact that all three tasks require the common skills of task analysis, research, evaluation of sources, organisation of information and data, critical reading and notetaking, critical analysis

and academic communication. The RSD provided a model for familiarising students with these skills through the six Facets of Research (see Chap. 2) common to all research tasks. This helped students to recognise that producing a response to a task involves a set of iterative skills and processes or logical pathways, which they could repeat and adapt for all research tasks in this unit, and in their broader course of study (see also Pretorius et al., 2013). Making the skills explicit through RSD-aligned assessment design, marking rubrics and library skills sessions supported our goal of enabling students to 'learn to learn'.

In addition to making skills explicit in the curriculum, the RSD's Scope for Student Autonomy provided a model for scaffolding targeted skills and extending students' skill development from one task to the next. This feature of the framework enabled us to build students' skills in an initial formative task at a lower level of autonomy and then guide students towards increasingly more complex summative assessment requiring more self-reliance.

One of the challenges with the cohort was to build students' confidence with the skills required for research so that they could engage more insightfully and critically with Management literature as they progressed through the semester. By building these skills progressively, we aimed to support students in reaching the assessment standards of Australian Qualifications Framework level 9, as mentioned above (Australian Government Department of Education & Training, 2019), and in achieving the Monash University Graduate Attributes (Monash University 2019a) that emphasise critical thinking and perceptive communication.

Placing the RSD framework at the centre of library–academic collaboration provided us with a shared language and conceptual approach, complementing the development of students' disciplinary concept knowledge. As Atkinson (2018 p. 12) notes, by developing and sustaining collaborative relationships, academic libraries can leverage resources and expertise by sharing information and practice across universities.

14.3 How the RSD Was Applied

The RSD framework was applied in three key ways: firstly, to target identified skills gaps in this student cohort; secondly, to design and develop the curriculum to enable students to build targeted skills with increasing levels of autonomy; and thirdly, as a shared pedagogical tool amongst academic and library staff to communicate using consistent skills-related terminology with students in order 'to bring these terms closer to the student vernacular' (Torres, 2018 p. 18). In combination, these three stages made learning requirements and skill development more explicit for students and provided infrastructure for assessment design to help them attain and demonstrate the required masters-level skills.

14.3.1 Targeting Skills Gaps and Increasing Student Autonomy

The RSD framework underpinned the assessment instructions, tutor feedback and face-to-face library sessions while providing explicit guidance relating to the required skills and how they could be progressed and transfer from one task to the next. Designed in alignment with the principles of the RSD framework, the assessment tasks were scaffolded with increasing autonomy—from *Prescribed* formative assessment (guided reading worksheets) to *Bounded* assessment (in-class essay) to more complex, *Scaffolded* summative assessment (group report).

14.3.2 Applying the RSD Framework for Curriculum and Assessment Design

As this cohort has traditionally struggled in this unit, the purpose of applying the RSD framework to this Business masters unit was to enable students to build research and academic skills at the level required to succeed in this master's unit. Two features of the RSD were especially useful for the purpose of curriculum design: its emphasis on the crucial role of increasing student autonomy in skill development and its clear categorisation of essential research and academic skills into six skill 'facets'.

The RSD framework provides a clear model for how requisite skills can be scaffolded so that autonomy in the application of skills is appropriate to the student cohort at the time of assessment. There are five autonomy descriptors in the RSD framework ranging from *Prescribed Research* involving considerable guidance from the educator to *Bounded Research* where students apply some autonomy with limited guidance from the educator, through to *Scaffolded Research* where students start to shape independent research with some educator support, moving along to Open-ended *Research* where students have limited educator intervention, and finally, *Unbounded Research* where students work independently without guidance.

When developing the unit, the RSD framework guided the chief examiner's choices of assessment tasks and sequencing:

- Assignment 1: Guided reading worksheets plus an in-class essay (weeks 1–4, due week 5). *Prescribed* (worksheets) and *Bounded* (essay) levels of autonomy.
- Assignment 2: Team research report and boardroom presentation (weeks 9–11). *Scaffolded* level of autonomy.
- Assignment 3: Individual in-class test (written paper) (week 12). *Scaffolded* level of autonomy.

As can be seen above, the first two assignments required students to practise the same skills (with a primary focus on RSD Skill Facets of *Embark and Clarify* to interpret the task, *Find and Generate* sources of information, *Analyse and Synthesise* information, and *Communicate and Apply* their ideas in the required format).

Furthermore, each task was designed to gradually scaffold the development of these skill sets.

Tasks were set strategically throughout the semester and structured from low *(Prescribed)* autonomy to high *(Open-ended)* autonomy according to the RSD framework's descriptors in the Scope for Student Autonomy. For example, in weeks 1 to 4, students were given a task that mapped to the *Prescribed* level of autonomy of the RSD framework: reading and taking notes on a single journal article per week. Students were instructed to prepare their notes in a highly structured and *Prescribed* guided reading worksheet (with note-taking questions provided to prompt completion of each section of the article). Students then used the completed worksheets as the basis for writing the individual in-class essay. This essay was at a *Prescribed* level of autonomy in terms of research requirements and communication format but *Bounded* autonomy in terms of interpreting the essay question and responding with students' own analysis using discipline-specific concepts. After receiving targeted individual feedback and further in-class guidance, students were then assigned into groups for Assignment 2. Assignment 2 required students to build on the same skills of task analysis, critical reading, analysis and academic communication, but extended them by exercising greater autonomy in terms of *Finding and Generating* their sources of information. Overall, the Assignment 2 task was at *Bounded* autonomy in terms of task question and format, but *Scaffolded* in terms of research, note-taking and analysis.

14.3.3 Creating Marking Rubrics Informed by the RSD Framework

The marking rubrics were also modelled on the RSD framework, with the six skill facets adapted to suit the specific requirements of the essay task. This RSD-based rubric served to make explicit the skills students would need to have to undertake each task. The rubric also provided post-task areas for future improvement of skills. Clear descriptors were provided in the rubrics to explain to students what these skills look like when they are applied with greater autonomy. This was communicated to students by using marking bands and integrating discipline-specific content knowledge requirements in the rubrics. Students were given feedback on targeted skills in the formative tasks after week 5, which served to build confidence and identified skills gaps in preparation for the more complex team research report assignment due in week 9.

14.3.4 Applying the RSD Framework to Our Teaching Partnership

The RSD framework assisted with guiding a scaffolded approach to skill development. This enabled the library's research and learning team to pinpoint which key skills were required by students as they progressed through the unit. This helped to identify when library teams should step into the unit and how skill development sessions would be aligned accordingly. Therefore, the library's skill development sessions were scheduled to target the key skills associated with assessment tasks on a just-in-time basis (Novak et al., 2011). Every semester, the library taught two embedded sessions in tutorial time:

- Week 2: Working in groups (first four years) / Essay writing skills (subsequently). Taught by a learning skills adviser.
- Week 6: Researching and writing a critical, argumentative essay (first four years) / Researching and writing the team report (subsequent). Co-taught by learning skills adviser and subject librarian.

Within the library's teaching team, the RSD further facilitated effective intra-library collaboration between the learning skills adviser and subject librarian. The RSD framework's integrated, explicit approach to the overall process of research was replicated in the 'sandwich' structure of the session co-taught by the learning skills adviser and subject librarian in week 6. Within a session of 45–60 min:

- the learning skills adviser started with a task analysis activity to better understand topics and questions to be researched, in which students generated a list of research keywords for their assignment;
- then the subject librarian demonstrated how to research assignment topics and keywords in the library databases; and
- finally, the learning skills adviser returned to suggest strategies for critically reading and analysing the articles obtained during the research process, and for structuring and communicating their ideas in the report format.

The learning skills adviser addressed the skills required for teamwork, task analysis, critical analysis and written communication, whereas the subject librarian guided students on the research skills required to find relevant and high-quality information sources. Rather than perceiving these as discrete tasks, the RSD framework demonstrated to students the logical links from analysing their task *(Embark and Clarify)* to searching for relevant resources *(Find and Generate)*, to critical analysis *(Analyse and Synthesise)*, through to writing *(Communicate and Apply)*. Interestingly, student evaluation of the unit at times lacks distinction between the two library teaching staff members and their different roles and expertise—powerful evidence of the student's perception of the process as an integrated whole.

14.4   Outcomes

Our pedagogical collaboration in this unit has correlated with consistently positive student learning outcomes. In the ten semesters since the collaboration began, the average unit pass rate has been 96.872%. This compares well with pass rates for other contemporaneous Master of Management units. During the collaboration period, the faculty's Caulfield-based postgraduate units saw an average of between 5 and 8% of students receive a fail mark of 49/100 or below. In contrast, this unit has seen a much lower rate of fail overall (typically between 1 and 3% of students each year). More students met the unit requirements and achieved a pass or higher grade, which clearly indicates that they are benefiting from the research skill development learning support embedded in the unit.

Student Evaluation of Teaching and Units (SETU) survey responses provide insights into the student experience in the unit. The unit has received consistently positive student responses to the statements 'The learning resources in this unit supported my studies' (used in surveys 2014–2015) and 'The resources helped me achieve the Learning Outcomes for the unit' (used in surveys 2016 to present). This statement received median scores between 4.1 and 4.75 out of 5 across the semesters; between 77.63 and 93.34% of students either agreed or strongly agreed with the statement.

Another element of SETU that showcases the value of underpinning both the teaching collaboration and the unit's assessment tasks using the RSD framework is visible in students' comments. Some examples in response to the question 'Which aspects of this unit did you find most effective?' (Monash University 2019d, para. 4), with italics provided for emphasis:

- The instructors were very helpful by *specifying a format* and *providing guidelines* for the essays, even inviting a few staff members from the library to *teach us citations, referencing and researching.*
- Interaction with librarians.
- The *questions* of assignments that are *designed very well*, and these *questions are useful* to help us *to review and understand* the knowledge.
- *academic writing* and *critical thinking.*
- [Learning] *writing skills…*
- I got how to *make a great presentation and how to communicate with workmates.*
- All the *assessments and the tasks were beautifully crafted* and I loved every bit of attending my tutorials.

These comments strongly indicate that from undertaking this unit, students were able to articulate and identify the specific research skills required to effectively engage with disciplinary knowledge. The RSD framework has been instrumental in enabling us to engender key Monash Graduate Attributes in creating 'critical and creative scholars who produce innovative solutions to problems, apply research skills to a range of challenges and communicate perceptively and effectively' (Monash University 2019a). Our experience, therefore, validates how the RSD framework

has in other learning contexts made research skill development more explicit within the curriculum, leading more students to perceive that they were learning valuable transferable skills (Willison, 2012).

The comments suggest that students enjoyed the learning experience, and valued the teaching collaboration and contribution made by library staff to their learning. This underscores how the RSD and our teaching partnership approach have achieved the original objectives to improve students' academic skills and ability to 'learn to learn'.

14.5 Reflection on the Initiative

The RSD framework proved valuable to students and to us as teaching practitioners in a number of significant ways. During the planning stages of curriculum development, the RSD framework served as a useful diagnostic tool; it helped to place students at the centre of their learning by clarifying to educators what skills the students 'didn't get'. As such, the RSD served as a construct that assisted in making learning visible to us, demonstrating the importance of scaffolding and incrementally building student skills so that students can more readily transfer these skills to new tasks. Making learning visible with the RSD framework also made way for collaborative curriculum design, aligning pedagogical approaches between the library and academic teaching staff. Over the years the RSD has proven to be a flexible and responsive framework adapting to refreshed content and changing learning needs.

An example of how the RSD framework has continued to inform and enable students' skill development in this unit is demonstrated by Assignment 1's use of guided reading worksheets as the basis for the timed in-class essay task. The formative, lower-autonomy tasks of Assignment 1 prepared students in a guided way for the key skills required in the more complex, summative Assignment 2 (group report and presentation). The RSD framework enabled educators to refer to specific skill facets and align these skills to the appropriate range of learner autonomy. Thus the RSD framework proved a valuable means to guide the progressive development of specific skills from one task to the next, from initial instruction to subsequent feedback. This served the purpose of developing student autonomy, and students became more self-reliant, explicitly scaffolding the later summative task with formative assessment. Therefore, the *Prescribed/Bounded* level-guided reading worksheet progresses students' skill development via the *Scaffolded* in-class essay to the (slightly less) *Scaffolded* level group report, showing clear progress across the levels of autonomy as set out along the horizontal axis of the RSD framework.

As the framework is logically organised around the fundamental skills and processes pertaining to the research process, we were able to use the RSD as a tool to explicitly develop these skills in the curriculum. For example, the RSD framework provided us, as a diverse teaching team, with a common pedagogical perspective and mutually understood language. Anchoring our teaching approach with the RSD framework supported a way to visualise, unpack and articulate the research process to,

in turn, communicate this skill set to students using consistent terminology. Another example is how the RSD informed the construction and articulation of skills in our marking rubrics for each assessment task (see Appendix in this chapter). The RSD assisted in providing clarity in our rubrics about the standard of work expected of students in relation to their application of requisite skills to complete each aspect of the task.

The collaboration has provided a model for embedding skill development into the unit's curriculum, ensuring that students' research and academic skills are built alongside discipline knowledge and skills (Chanock, 2013) in accordance with the literature regarding good practice in this area (Briguglio & Watson, 2014; Harris & Ashton, 2011; Maldoni, 2018). Having the RSD at the centre of this partnership allowed us to collaboratively design embedded in-class activities to build students' academic skills with minimal disruption and sustainably to an already crowded curriculum (see also Pham & Tanner, 2015). Most recently, the unit's chief examiner and the same library team have adapted the skill development program from this postgraduate unit to a similar undergraduate unit, building on existing relationships, resources and pedagogical experience. This RSD-based program has also become an exemplar for maximising the professional research and learning partnership between subject librarians and learning skills advisers.

As a shared tool of practice, the RSD framework made it easier for us to exchange pedagogical expertise across varying approaches to knowledge, ways of thinking and disciplinary language. For example, without such a tool in place to guide students' research skill development, the librarian may have discussed the use of research databases with students using technical and instructional language; and the discipline academic may have described task research requirements in a discipline-specific way (e.g. referring to key HRM journals or concepts). By placing the RSD framework at the centre of our teaching collaboration, we found a consistent language with which we could speak to each other and to students about the development of expected research skills. Furthermore, the RSD offered a way to conceptualise and articulate the skills that were implicitly embedded in our teaching and learning activities, and to make those skills visible and overt to students. Both sides of our collaboration (the academic's content and curriculum design and the library's research and academic skills development program) found a shared pedagogy using this tool, which was then 'baked into' the curriculum and our teaching practice.

The RSD proved to be flexible and responsive in order to accommodate curriculum changes and student learning needs. An example of this flexibility took place a few years into the collaboration when the chief examiner shifted the focus from developing students' teamwork skills related to report writing to building students' skills for the in-class essay test. Library skill development workshops informed by the RSD framework changed accordingly. This shows the flexibility and adaptability of the RSD as the tool was equally suitable for contrasting assessment tasks—the group report and the individual in-class essay test.

In conclusion, program content and techniques pioneered in this unit have been adopted for use in other library–faculty collaborations, both embedded in and parallel to curricula. The spirit of experimentation and partnership has generated materials

useful for other RSD-informed teaching collaborations, affirming the model's transferability as Torres and Jansen outline (2016). Our experience suggests the RSD framework has pedagogically robust qualities that can motivate student learning and sustain long-term collaboration. In helping our students 'learn to learn' research and academic skills with this adaptable pedagogical tool, we too have learned a great deal that can be transferred to other contexts.

Appendix

Class Essay Marking Rubric

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student understood the task? This will be indicated by an introduction that: • Includes a statement about the intent of the essay question and outline of response; • Explains relevance of guided readings to the response to the essay topic	The introduction • Has an absent or unclear statement about the intent of the essay question and how the response will proceed; • Does not include a statement about the relevance of guided readings to the essay response	The introduction • Has a statement about the intent of the essay question and how the response will proceed; • Includes a statement about the relevance of guided readings to the essay response. A Pass essay may indicate some confusion or ambiguity about the purpose of the essay or the relevance of the readings	The introduction • Has a clear and concise statement about the intent of the essay question and how the response will proceed; • Has a clear statement about the relevance of guided readings to the response to the essay topic

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student identified relevant and appropriate material in the readings to apply to the essay question? This will be indicated by • Reference to and broad use of the weekly readings from weeks 1–4 to explain key models, concepts, ideas and underlying assumptions of HRM; • Material drawn from the readings from weeks 1–4 is used appropriately to respond to the essay question	The student in their use of material from the readings to respond to the essay question • Has failed to refer to and/or made no or limited use of material from the readings (weeks 1–4) to explain key models, concepts, ideas and underlying assumptions; • Has inappropriately used material drawn from the readings from weeks 1–4 indicating a high level of confusion	The student in their use of material from the readings to respond to the essay question • Made reference to and used the material from the readings to explain key concepts, models and ideas in their response to the essay question; • Used the material from the readings from weeks 1–4 appropriately although there may be some over-reliance on one or two articles rather than a broad spread at the Pass level	The student in their use of material from the readings to respond to the essay question • Confidently made reference to and broadly used the material to explain key concepts, models and ideas from the readings (weeks 1–4) in their response to the essay question; • Demonstrated a confident use of the content of the readings from weeks 1–4 in their essay response by applying it comprehensively to support their essay response
Has the student been able to use the material from the readings critically? • Critical argument by identifying and using different perspectives, models and frameworks drawn from the readings to respond to the essay question • Included discussion of criticisms or limitations of HRM/SHRM	The student in their essay response • Offers a descriptive account in that it does not acknowledge or include different or competing perspectives drawn from the readings; • Does not include criticisms or limitations of HRM/SHRM	The student in their essay response • Develops a critical argument by identifying and using different perspectives, models and frameworks drawn from the readings to respond to the essay question; • Offers a discussion of the criticisms or limitations of HRM drawn from the readings. Pass responses will do this to a limited extent	The student in their essay response • Develops a critical argument by integrating competing perspectives, ideas, concepts and models and acknowledges a diversity of perspectives drawn from the readings; • Offers a sophisticated discussion of the criticisms or limitations of HRM supported by evidence from the readings

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student been able to organise and structure their response to the essay question and their guided reading notes eg include an introduction, middle and conclusion. Are the guided reading worksheets fit for purpose?	The student has • Failed to write a response that conforms to a normally expected essay structure; • Failed to respond to key aspects of the essay question; • Not met the requirements necessary for the guided reading worksheets	• The essay structure generally conforms to the accepted conventions of an essay, it is clear but may neglect to address some parts of the essay question • Guided readings generally conform to requirements	• The essay structure is clear and responds to all parts of the essay question and it conforms to the accepted conventions of an essay • Guided readings conform to requirements
Has the student been able to integrate information from the guided readings to offer an appropriate response to the essay question?	The student's response does not indicate they have understood materials as they relate to the essay question. This may be indicated by • Absent or confused definitions, concepts, models and assumptions drawn from the readings and relevant to the essay question; • Failure to integrate knowledge drawn from the readings as evidence for arguments in response to the essay question, including limitations of HRM	The student has • Provided a coherent response to the essay question. A Pass level response is indicated by • Identifying and providing definitions, relevant concepts, models and assumptions drawn from the readings to evidence arguments in response to the essay question; • Critical argument supported by evidence from the readings; • Acknowledging limitations and criticisms of HRM/SHRM (this may be limited)	The student has • Provided a high level of synthesis, analysis and has confidently applied newly gained knowledge about HRM concepts theory and models. Indicated by • Identifying and providing definitions, relevant concepts, models and assumptions drawn from the readings to evidence their essay response; • Critically arguing a response to the essay question supported by evidence from the readings; • Acknowledging limitations and criticisms of HRM/SHRM

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student been able to communicate the new knowledge they are generating through their essay response with an awareness of the discipline and social, cultural and ethical issues relevant to HRM	In their essay, the student • Uses general management or lay language rather than relevant HRM concepts, ideas and language; • Uses 'HR speak' that fails to indicate deeper understanding of HRM; • Fails to paraphrase and overly relies on use of direct quotes and/or have plagiarised passages of text	The student • Indicates their own 'voice' by translating HRM concepts, ideas and language into their own words; • May use direct quotes (not over-rely) that are relevant and appropriate to the arguments in the essay; • Observes academic conventions regarding plagiarism	The student • Indicates a confident 'voice' in communicating HRM concepts, ideas and language; • May use direct quotes. These will be relevant and used sparingly and to good effect; • Observes academic conventions regarding plagiarism

Group Assignment Report Marking Rubric

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student understood the task? This will be indicated by an introduction that: • Includes a statement about the intent of the essay question and outline of response; • Explains relevance of guided readings to the response to the essay topic	The introduction • Has an absent or unclear statement about the intent of the essay question and how the response will proceed; • Does not include a statement about the relevance of guided readings to the essay response	The introduction • Has a statement about the intent of the essay question and how the response will proceed; • Includes a statement about the relevance of guided readings to the essay response. A Pass essay may indicate some confusion or ambiguity about the purpose of the essay or the relevance of the readings	The introduction • Has a clear and concise statement about the intent of the essay question and how the response will proceed; • Has a clear statement about the relevance of guided readings to the response to the essay topic
Has the student identified relevant and appropriate material in the readings to apply to the essay question? This will be indicated by • Reference to and broad use of the weekly readings from weeks 1–4 to explain key models, concepts, ideas and underlying assumptions of HRM; • Material drawn from the readings from weeks 1–4 is used appropriately to respond to the essay question	The student in their use of material from the readings to respond to the essay question • Has failed to refer to and/or made no or limited use of material from the readings (weeks 1–4) to explain key models, concepts, ideas and underlying assumptions; • Has inappropriately used material drawn from the readings from weeks 1–4 indicating a high level of confusion	The student in their use of material from the readings to respond to the essay question • Made reference to and used the material from the readings to explain key concepts, models and ideas in their response to the essay question; • Used the material from the readings from weeks 1–4 appropriately although there may be some over-reliance on one or two articles rather than a broad spread at the Pass level	The student in their use of material from the readings to respond to the essay question • Confidently made reference to and broadly used the material to explain key concepts, models and ideas from the readings (weeks 1–4) in their response to the essay question; • Demonstrated a confident use of the content of the readings from weeks 1–4 in their essay response by applying it comprehensively to support their essay response

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student been able to use the material from the readings critically? • Critical argument by identifying and using different perspectives, models and frameworks drawn from the readings to respond to the essay question • Included discussion of criticisms or limitations of HRM/SHRM	The student in their essay response • Offers a descriptive account in that it does not acknowledge or include different or competing perspectives drawn from the readings; • Does not include criticisms or limitations of HRM/SHRM	The student in their essay response • Develops a critical argument by identifying and using different perspectives, models and frameworks drawn from the readings to respond to the essay question; • Offers a discussion of the criticisms or limitations of HRM drawn from the readings. Pass responses will do this to a limited extent	The student in their essay response • Develops a critical argument by integrating competing perspectives, ideas, concepts and models and acknowledges a diversity of perspectives drawn from the readings; • Offers a sophisticated discussion of the criticisms or limitations of HRM supported by evidence from the readings
Has the student been able to organise and structure their response to the essay question and their guided reading notes, e.g., include an introduction, middle and conclusion. Are the guided reading worksheets fit for purpose?	The student has • Failed to write a response that conforms to a normally expected essay structure; • Failed to respond to key aspects of the essay question; • Not met the requirements necessary for the guided reading worksheets	• The essay structure generally conforms to the accepted conventions of an essay, it is clear but may neglect to address some parts of the essay question • Guided readings generally conform to requirements	• The essay structure is clear and responds to all parts of the essay question and it conforms to the accepted conventions of an essay • Guided readings conform to requirements

(continued)

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction
Has the student been able to integrate information from the guided readings to offer an appropriate response to the essay question?	The student's response does not indicate they have understood materials as they relate to the essay question. This may be indicated by • Absent or confused definitions, concepts, models and assumptions drawn from the readings and relevant to the essay question; • Failure to integrate knowledge drawn from the readings as evidence for arguments in response to the essay question, including limitations of HRM	The student has • Provided a coherent response to the essay question. A Pass level response is indicated by • Identifying and providing definitions, relevant concepts, models and assumptions drawn from the readings to evidence arguments in response to the essay question; • Critical argument supported by evidence from the readings; • Acknowledging limitations and criticisms of HRM/SHRM (this may be limited)	The student has • Provided a high level of synthesis, analysis and has confidently applied newly gained knowledge about HRM concepts theory and models. Indicated by • Identifying and providing definitions, relevant concepts, models and assumptions drawn from the readings to evidence their essay response; • Critically arguing a response to the essay question supported by evidence from the readings; • Acknowledging limitations and criticisms of HRM/SHRM
Has the student been able to communicate the new knowledge they are generating through their essay response with an awareness of the discipline and social, cultural and ethical issues relevant to HRM	In their essay, the student • Uses general management or lay language rather than relevant HRM concepts, ideas and language; • Uses 'HR speak' that fails to indicate a deeper understanding of HRM; • Fails to paraphrase and overly relies on the use of direct quotes and/or have plagiarised passages of text	The student • Indicates their own 'voice' by translating HRM concepts, ideas and language into their own words; • May use direct quotes (not over-rely) that are relevant and appropriate to the arguments in the essay; • Observes academic conventions regarding plagiarism	The student • Indicates a confident 'voice' in communicating HRM concepts, ideas and language; • May use direct quotes. These will be relevant and used sparingly and to good effect; • Observes academic conventions regarding plagiarism

(continued)

Students should note these requirements to guide their preparation for the essay	N = FAIL	Pass—Credit	Distinction—High Distinction

References

Atkinson, J. (2018). Collaboration and academic libraries: An overview and literature review. In J. Atkinson (Ed.), *Collaboration and the academic library* (pp. 12–34). Chandos Publishing.

Australian Government Department of Education and Training. (2019). AQF levels. https://www.aqf.edu.au/aqf-levels

Baik, C., & Greig, J. (2009). Improving the academic outcomes of undergraduate ESL students: The case for discipline-based academic skills programs. *Higher Education Research and Development, 28*(4), 401–416. https://doi.org/10.1080/07294360903067005

Birzina, R., Cedere, D., & Petersone, L. (2019). Factors influencing the first year students' adaptation to natural science studies in higher education. *Journal of Baltic Science Education, 18*(3), 349–361. https://doi.org/10.33225/jbse/19.18.349

Briguglio, C., & Watson, S. (2014). Embedding English language across the curriculum in higher education: A continuum of development support. *Australian Journal of Language and Literacy, 37*(1), 67–74.

Chanock, K. (2013). Teaching subject literacies through blended learning: Reflections on a collaboration between academic learning staff and teachers in the disciplines. *Journal of Academic Language and Learning, 7*(2), A106–A119. http://www.journal.aall.org.au/index.php/jall/article/viewArticle/256

Department of Education. (2019, April). *International student data monthly summary*. https://internationaleducation.gov.au/research/International-Student-Data/Documents/MONTHLY%20SUMMARIES/2019/Apr%202019%20MonthlyInfographic.pdf

Eraut, M. (1994). *Developing professional knowledge and competence*. Falmer Press.

Harris, A., & Ashton, J. L. (2011). Embedding and integrating language and academic skills: An innovative approach. *Journal of Academic Language and Learning, 5*(2), A73–A87. https://ro.ecu.edu.au/ecuworks2011/174

Hung, W. (2013). Problem-based learning: A learning environment for enhancing learning transfer. *New Directions for Adult and Continuing Education, 2013*(137), 27–38. https://doi.org/10.1002/ace.20042

Maldoni, A. M. (2018). 'Degrees of deception' to degrees of proficiency: Embedding academic literacies into the disciplines. *Journal of Academic Language and Learning, 12*(2), A102–A129. http://journal.aall.org.au/index.php/jall/article/view/408

Marini, A., & Genereux, R. (1995). The challenge of teaching for transfer. In A. McKeough, J. Lupart, & A. Marini (Eds.), *Teaching for transfer: Fostering generalization in learning* (pp. 1–19). Erlbaum.

Monash University. (2019a). *Course design policy*. https://www.monash.edu/__data/assets/pdf_file/0009/786969/Course-Design-Policy.pdf

Monash University. (2019b). *Master of Business*. http://www.monash.edu/pubs/handbooks/courses/B6005.html

Monash University. (2019c). *Library skills development*. https://www.monash.edu/library/skills/rsd

Monash University. (2019d). *Survey instrument*. https://www.monash.edu/ups/setu/about/setu-questions

Novak, G., Buskist, W., & Groccia, J. E. (2011). Just-in-time teaching. *New Directions for Teaching and Learning, 2011*(128), 63–73.

Pham, H. T., & Tanner, K. (2015). Collaboration between academics and library staff: A structurationist perspective. *Australian Academic & Research Libraries, 46*(1), 2–18. https://doi.org/10.1080/00048623.2014.989661

Pretorius, L., Bailey, C., & Miles, M. (2013). Constructive alignment and the Research Skills Development framework: Using theory to practically align graduate attributes, learning experiences, and assessment tasks in undergraduate midwifery. *International Journal of Teaching and Learning in Higher Education, 25*(3), 378–384. https://doi.org/10.4225/03/581a84b330ddb

Taib, A., & Holden, J. (2013). 'Third generation' conversations—A partnership approach to embedding research and learning skills development in the first year. A Practice Report. *The International Journal of the First Year in Higher Education, 4*(2), 131–136. https://doi.org/10.5204/intjfyhe.v4i2.178

Torres, L. (2018). Research skills in the first-year biology practical – Are they there? *Journal of University Teaching & Learning Practice, 15*(4), 1–23.

Torres, L. & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council of Undergraduate Research Quarterly, 37*(1), 26–33. https://doi.org/10.18833/curq/37/1/9

Universities Australia. (2018). How international students benefit Australia. https://www.universitiesaustralia.edu.au/media-item/how-international-students-benefit-australia/

Willison, J. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research & Development, 31*(6), 905–919. https://doi.org/10.1080/07294360.2012.658760

Willison, J. (2018.). Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching & Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/1

Willison, J. & O'Regan, K. (2006, 2018). *Research Skill Development framework.* https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf

Willison, J., Schapper, J., & Teo, E. (2009, February 6). *Multiple methods of improvement of research skills in business ethics and business law.* Paper presented at the QATLHEBEC conference, University of Melbourne, Melbourne, Australia.

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Part V
Case Studies Theme 4—Contemporary Skill Agendas

Chapter 15
Transforming Practice Through Digital Skills Development

Sylvia Pilz, Amber McLeod, and Barbara Yazbeck

Abstract In response to concerns that university students are not being provided with adequate opportunities to develop the digital skills required for successful study, Monash University Library seized the opportunity to bring currency to our Library skill development programmes by connecting the skills students need for research (i.e. using digital information) to the digital skills needed more broadly for functioning in a digital society. This chapter describes how the Digital Skills Development (DSD) framework was piloted in a pathway programme in the Faculty of Education at Monash University, with a cohort that historically displayed varying degrees of digital capabilities. We describe the library-led initiative that resulted in the development of the DSD framework, and we also describe how the framework informed the development of a workshop delivered to this group of learners. We include findings gained from the skills self-assessment tool that we developed to capture students' self-perceived confidence and autonomy. We share the learnings gained from the experience and offer recommendations for future application of the DSD in pathway programmes.

15.1 Introduction

The Library at Monash University had an established reputation for contributing to the development of a range of skills, going beyond 'information skills' (Smith, 2011; Torres et al., 2014) using the MELT (Models of Engaged Learning and Teaching) frameworks described in Chap. 2 of this book. Over the years, Monash University Library (MUL) had become adept at responding to various emergent skill agendas by being able to conceptualise the links between research skills and other skill sets (i.e. work skills). This provided the ideal environment to undertake the development of a sister framework with the view of articulating the digital skills students need to

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develop as part of their university studies. The result became known as the Digital Skills Development (DSD) framework (https://www.monash.edu/__data/assets/pdf_file/0010/1652437/DSD-22.05.20.pdf).

15.2   Collaborative Partnerships

The DSD framework was the result of collaboration between the Library's Research and Learning Skill Leads, academics and other learning and teaching specialists across the University. The group, which became known as the Digital Skills Working Group, was formed in early 2017 to look at the creation of a framework that would describe the digital skills, attributes and capabilities required for 'collaborating, learning, researching, working, and functioning' in a digital age (Torres et al., 2018). It was acknowledged that while content knowledge is taught in class, providing is explicit instruction with appropriate levels of incremental guidance is rarely given to students in terms of the digital skills required to complete learning activities and assignments. The working group's familiarity and success applying the Models of Engaged Learning and Teaching or MELT (Willison, 2017; Willison, 2020) led to exploring how digital skills could be represented using a taxonomy for describing such skills within a learning continuum that explicates their development informed by the same guiding parameters as the MELT.

As Cuban et al. (2001) point out, many educators, policy makers and business leaders assume that just equipping students with technology will somehow lead to improved digital outcomes. But as Bennett and Maton (2010) have argued, access and exposure are only part of the picture and that it is interests, motivation and need that influences young people's experience of technology. Furthermore, it seems that everyday technology use may not be an indicator of readiness to use technology at University as part of formal learning (Bennett & Maton, 2010). Most importantly, numerous studies (Duncan-Howell 2012; Margaryan et al., 2011; Sánchez et al., 2011) have found that learners' digital skills vary greatly and are limited to a narrow range of established technologies, and that too often, school leavers have not achieved the levels of digital competence expected upon entrance to further studies.

Within this context, it was envisaged that the DSD framework would be useful in at least two ways: it would provide educators with a shared language to guide the development of students' digital skills, and it would address the challenge of making digital skills visible in the curriculum and in assessment design. Like its sister frameworks, the Research Skill Development (RSD) framework (Willison & O'Regan 2006, 2018) and the Work Skill Development (WSD) framework (Bandaranaike, Willison & Monash University Library, 2019), the DSD framework would take a developmental view of learning by guiding educators to build students' skills incrementally towards increasing self-reliance (Willison et al., 2016).

15.3 The Digital Skill Development (DSD) Framework

The DSD framework describes the skills students require in order to engage in digital contexts for learning, working and functioning in society. The definition of digital skills adopted by the Working Group was taken from Martin and Grudziecki (2006):

> [Digital skills are] the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process (p. 255).

The Working Group favoured this broad definition of digital literacy because it encompasses skills required for the *consumption* of digital information as well as the skills required for *creating* digital information. As such, this goes beyond describing digital skills as skills for information-seeking purposes and focuses on the role higher order cognitive (i.e. integrate, evaluate, analyse and synthesise) and metacognitive skills play in the use of technology.

The DSD shares the pedagogical parameters of the other MELT frameworks. Like the RSD and WSD, it is comprised of a vertical and a horizontal axis. The vertical axis depicts the six digital skills or 'Digital Skill Facets', presented as verb couplets with accompanying descriptors, a guiding question and an adjective referring to the affective domain. The Digital Skill Facets and Descriptors are as shown in Table 15.1.

The horizontal axis presents a continuum for the incremental development of student autonomy as informed by Vygotsky's Zone of Proximal Development (Vygotsky 1978) described here as the 'Scope for Student Autonomy', depicted in Table 15.2.

The Scope for Student Autonomy will vary for each learner depending on the learning context, the skills the student needs to draw on in that context and where the

Table 15.1 The horizontal axis of the DSD depicting Facets and Descriptors

Explore and Clarify	Determine the purpose for using digital technology taking into account digital practices (i.e. e-safety, digital wellbeing, digital profile and footprint).
Select and Use	Choose the appropriate digital technology to use for the purpose
Evaluate and Reflect	Critically assess and reflect on the suitability of digital technology and practices in a changing digital environment
Organise and Manage	Organise and manage processes, self and team function using digital strategies and systems
Synthesise and Create	Synthesise using digital techniques to create new products, understandings and solutions
Collaborate and Communicate	Collaborate and communicate using digital practices in digital settings accounting for e-protocols, e-safety, digital wellbeing, profile and footprint

Table 15.2 The vertical axis of the DSD depicting the Scope for Student Autonomy

Prescribed	Highly structured directions and modelling from the educator prompt the learner(s) to…
Bounded	Boundaries set by the educator channel the learner(s) to …
Scaffolded	Scaffolds placed by the educator enable the learner(s) to independently…
Open-ended	Learners instinctively initiate engagement with digital technology that may be guided by the educator to…
Unbounded	Learners normalise digital practices in accordance with context to…

Fig. 15.1 DSD Framework Verso. (Reproduced with permission from Torres et al., 2018)

student is positioned within the autonomy or learning continuum in relation to each Digital Skill Facet. It is therefore important to apply the framework to a given context (i.e. learning at university) or to have a digital technology in mind, i.e. augmented reality (AR), to understand how the DSD framework provides guidance for educators as a pedagogical tool. The information in Fig. 15.1 taken from the verso of the DSD illustrates this point:

In addition to the above, the Working Group felt that an umbrella statement which encapsulated the social and ethical considerations pertinent to all areas of digital use was needed. The statement 'Applies social and ethical protocols for e-safety and wellbeing of self and others, taking account of digital profile, footprint and impact' runs parallel to the vertical axis and is intended to provide an 'ethos' that underpins all the Facets mentioned in Table 15.1.

15.4 Piloting the Digital Skill Development Framework

Academics in the Faculty of Education became interested in investigating the digital literacy levels of first year students after poor assignment results raised suspicions that not all students had the digital skills required to be successful in studies at university. As Bennett and Maton (2010) have noted, widely held assumptions that students are 'digital natives' (Prensky, 2001) who are 'tech-savvy' and immersed in digital technologies is flawed. In fact, a study by McLeod and Carabott (2019) of undergraduate Australian students found that a significant proportion of students new to university struggled with the technologies they encountered as part of their study (i.e. Learning Management System, library systems, administrative systems).

Furthermore, statistics from the Australian National Assessment Program (NAP) which rates IT proficiency of secondary school students at Year 10 seem to support this trend. In 2017, NAP found that only 54% of students at Year 10 reached the proficiency level expected at that year level (NAP, 2018). This 'skills gap' ultimately leads to a mismatch between the digital skills students need to do well at university and the digital skills students actually arrive at university with (McLeod & Carabott, 2019; Murray & Pérez, 2014). Academics in the Education faculty at Monash University realised they needed to provide more explicit instruction on using digital technologies and developing digital skills in their courses. It was within this context that the Library approached the course coordinator about piloting the DSD in the Diploma of Tertiary Studies. This programme was considered ideal as it feeds into multiple undergraduate courses including Education, Nursing, Business and Science.

15.5 Designing the Workshop

We designed a 2-hour workshop based on the skills described in the DSD framework with the intention of demonstrating to students that digital skill development, much like academic skill development, is important for success at university. To that end, the workshop was purposefully designed as an interactive, hands-on workshop meant to guide students through the requirements of an assignment task and in doing so, make the digital skills required for successful completion of that task explicit. The aims of the workshop were as follows:

1. Identify the range of digital skills needed for learning.
2. Develop awareness of what 'digital skills' encompass.
3. Reflect on the importance of digital skills for further study.
4. Provide an experience of using digital tools for learning.

The workshop was designed and delivered in the curriculum by two teaching teams of librarians and learning skills advisers. The 2-hour workshop was delivered to a total of 88 students across two Monash campuses.

In addition, we used the DSD framework to create an online self-assessment tool to help students develop awareness of their digital skills (Table 15.3). Students were asked to complete this self-assessment twice. Once before attending the 2-hour workshop at the beginning of semester and again in Week 7 after submitting the assignment. The tool asks students to consider how autonomously they could carry out specific digital tasks and to reflect on 'how much guidance' they perceived they required from others in demonstrating these skills. Students reflected on their ability to demonstrate these skills by aligning their responses to a scale informed by the DSD framework's Scope of Student Autonomy. The self-assessment was administered twice in order to gauge whether students were more aware of digital skills, and whether their confidence and autonomy had increased as a result of the workshop and assignment experience.

Table 15.3 Skills self-assessment tool

DSD skill facets	Skill Statements	Scope of Student Autonomy For each of the skill statements select ONE response
Explore and clarify	1. I am able to identify my purpose for using technology 2. I am able to consider the implications of my digital practices (i.e. e-safety, digital wellbeing, digital profile and footprint) 3. I have the confidence to explore the functionality of a range of digital technology 4. I am curious to explore how digital tools can meet my needs	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others
Select and use	1. I am able to choose the appropriate digital technology for my needs 2. I am able to work out how to use digital technology unfamiliar to me 3. I have the ability to apply a range of digital options/tools to meet my various needs 4. I know how to choose digital technology informed by criteria that matches my requirements	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others
Evaluate and reflect	1. I can manage myself and others in an online environment 2. I can use digital tools and strategies to organise and manage myself and others 3. I can manage my online identity and digital footprint 4. I can customise digital strategies and systems to suit myself and my team	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others

Table 15.3 (continued)

Organise and manage	1. I am able to reflect on my learning to improve my digital skills 2. I can adapt to a changing digital environment 3. I am able to judge the suitability of the technology I use 4. I am able to transfer my learning to new and unfamiliar digital contexts	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others
Synthesise and create	1. I know when to disconnect from the digital environment 2. I can use digital technology to help me draw conclusions 3. I can solve problems in a digital environment 4. I have the confidence to try new ways of analysing information using digital formats	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others
Collaborate and communicate	1. I am aware of visual, sensory, kinaesthetic and psychomotor digital technologies for analysis, i.e. augmented reality 2. I am able to participate in online environments 3. I am able to share in online environments 4. I can collaborate and co-create with others in a range of digital environments 5. I am aware of e-protocols, my e-safety, digital wellbeing, profile and footprint	• With guidance from experts all the time • With a lot of guidance from others • With some guidance from others • With a little guidance from others • With no guidance from others

The workshop was delivered in a way that scaffolded students' understanding of what digital skills entail so that they could identify the digital skills they needed to develop related to the assignment they would have to complete as part of this course.

To achieve this, we took an active learning approach using discovery learning techniques. A range of hands-on stimulus activities were created by the library's team of learning skills advisers and librarians that required students to reflect on the digital skills they were expected to develop. The workshop began with students being asked to draw a picture of a 'digitally savvy student' on a piece of butcher's paper. This gave students an opportunity to reflect on the aptitudes, dispositions and

skills that would be demonstrated by a digitally competent learner. Pictures included devices such as laptops and mobile phones, but also depicted abstract concepts like 'connectedness' and 'problem-solving'. One group of students depicted the digitally savvy student as being so integrated with technology that they virtually become one with their mobile phone (Fig. 15.2). An interesting image to contemplate! This was followed by activities designed to unpack the concept of 'digital skills' and present them as a range of cognitive and metacognitive capabilities. For instance, we asked students to consider the skills and dispositions required for identifying false news (i.e. a hoax email) and instructed them to write these down on sticky notes. The skills elicited on the sticky notes (such as questioning, referencing prior knowledge, evaluating credibility) were then matched against the skills described in the framework. In this way, students began to see everyday skills and abilities as skills required for digital learning and for functioning in a digital environment. We have found in previous workshops that these types of 'stimulus activities' help learners to unpack or 'deconstruct' the MELT frameworks quickly which leads to a deeper understanding of the skills we are asking them to develop. As Willison and O'Regan (2007) point out, in relation to research skills, being explicit about skill development is a key to skill acquisition. Furthermore, these activities also helped students to begin to understand the terminology used in the framework.

The workshop also asked students to focus on the assessment task for this course, which required them to prepare a group presentation on a seminal moment in their

Fig. 15.2 'The digitally savvy student'

field, i.e. the discovery of bacteria in science. Students were asked to consider how they would communicate, plan, prepare and create a group response to the task, including where to find and how to use academic literature to support their presentation. Throughout this unpacking of the concept of 'digital skills', students began to see that a seemingly common assignment task actually encompassed and required a range of digital skills from time management and working as a team online, to finding information in databases and sharing it with peers digitally, to employing the use of presentation software (i.e. Powerpoint or Prezi) to create a presentation. It was important as facilitators that we drew students' attention to suitable digital tools (i.e. Google docs, Zoom conferencing), and protocols for working as a group online and how these activities related to digital skills and practices. The result was a workshop where students engaged with the DSD framework through a series of interactive activities. The students then mapped the skills they identified in the assignment task (and wrote on sticky notes) to the facets of the DSD framework that were captured on flashcards (Fig. 15.3). In Fig. 15.3, the yellow flashcards show the facet taken from the DSD and the blue cards show skill statements aligned to the skill descriptor (i.e. 'I am able to choose the appropriate digital technology for my needs' and 'I am able to reflect on my learning to improve my digital skills'). We purposefully used language in our teaching informed by the DSD framework that made digital
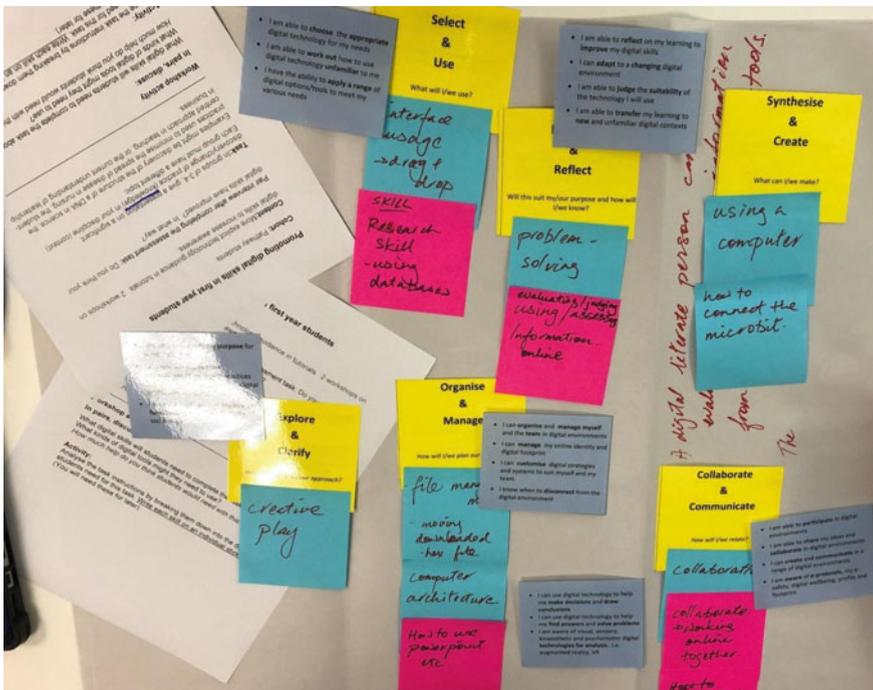
Fig. 15.3 Photo of a group's work matching sticky notes to flashcards

skills explicit to students as a way to highlight that these skills were important. That becoming both cognisant of these skills and applying them would make an impact upon their grades and skill development.

15.6   Outcomes

In order to determine the impact of introducing students to digital skills as a set of unique capabilities that inform all areas of learning, data was collected from students at four points during the semester: Early in semester when students attended the 2-hour library workshop and were asked to complete the online skills self-assessment ($n = 67$) and again after completing the group assignment in Week 7, when students were asked to retake the self-assessment ($n = 37$). Students were also asked to write a short reflection about the development of their digital skills and to interview one another about whether their digital skills had developed since the beginning of semester. These results were recorded and analysed to ascertain the effectiveness of using the DSD framework for digital skill development and future curriculum planning.

15.6.1   Student Awareness of Digital Skill Development

To measure the effectiveness of making students aware of digital skills, the results of the skills self-assessment, student reflection and interviews were analysed. In the data, we were looking for reference to digital skills as described in the DSD. Many students made comments that suggested they were thinking more broadly about what capabilities digital skills encompass and could see that skills such as *Organise and Manage* and *Collaborate and Communicate* were, in fact, essential skills for learning in a digital environment. These comments are typical of student responses, 'I know more about organising everyone and the ways you can do that with technology' and 'I've improved in terms of managing digitised content and resources'. This awareness was also reflected in the results of the skills self-assessment, particularly the second time students rated their skills in Week 7 of semester (see Appendix), where 86% responded to the prompt, 'I can manage myself and others in an online environment' (item 13) with either 'a little guidance' or 'no guidance from others' (i.e. high confidence/autonomy). Students also commented on the way the workshops had helped them develop a greater awareness of the suite of digital tools available, 'I didn't know how to use Google Docs or Google Slides, I didn't know they existed, … so like that's really cool cause group assignments are going to be way easier now'. As well as understanding the advantages of using digital technologies for group work, students indicated through the interviews an improved ability to collaborate and co-create in an online environment and even customise the tools to suit themselves and their group. One student summed this up well with, '[it's easier now] to organise other

people and find how to work together more effectively, through better communication through IT, especially Google docs, Google slides. Organising everyone and the ways you can do that'.

Students also felt that increasing their awareness of digital skills prepared them better for the assignment because it made them more aware of the importance of digital skills. As one student put it,

> The only thing that really has developed is my awareness of the amount of ways you can do a group assignment through technology, that there are more convenient ways to do it rather than just meeting up in person and speaking about it, that there are ways that you can do it through technology that make the whole process way smoother. (Science student)

Not all students, however, reported an improvement in their awareness or understanding of what 'digital skills' entail. These comments show that for some students with self-identified low autonomy, further development is required:

> I'm still vague as to what a digital skill is… (Science student)
>
> No, because I'm horrible with technology and I'll never improve no matter how hard I try. But I appreciate them trying. (Education student)
>
> No, I struggle with Word, so it's not going to change. I can't do PowerPoint so I did the Google docs PowerPoint because I didn't know how to do the normal one. (Nursing student)

In one instance, even a student with self-perceived high autonomy did not feel the workshop developed their digital skills much,

> I don't think [my digital skills] have improved an overly large amount, I've always been around technology my entire life so it's not a foreign concept to be working with a computer all the time, so for the most part my digital skills haven't changed. (Science student)

Nevertheless, the skills self-assessment revealed that most students felt more confident about their digital skills by mid-semester (Week 7) when they were asked to re-do the self-assessment (see Appendix). In particular, the following responses are telling; in response to the prompt, 'I am able to identify my purpose for using technology' (item 1), 89% of students responded 'with a little guidance' or 'with no guidance' (i.e. high confidence/autonomy), up 24% from Week 1. Likewise, when responding to the prompt, 'I have the confidence to explore the functionality of a range of digital technology' (item 3), responses jumped from 52% confidence the first time students responded to the self-assessment to 83% confidence by Week 7. This rise in perceived confidence and autonomy was further reflected in the response to the prompt, 'I am curious to explore how digital tools can meet my needs' (item 4), which jumped from 59% to 75% and the prompt, 'I am aware of e-protocols, my e-safety, digital wellbeing, profile and footprint' (item 25), which likewise jumped 27 points from 59% to 86% by Week 7. The responses (see Appendix) show a consistent increase in confidence and autonomy as an overall trend.

It is interesting to compare this with areas students expressed high confidence and autonomy in the first time they completed the self-assessment, early in the semester. Perhaps not surprisingly, two areas in which students expressed high confidence and autonomy when first responding to the self-assessment were item 22 'I am able to

participate in online environments' (84.5%) and item 23 'I am able to share in online environments' (76%) (see Appendix). Nevertheless, even here students expressed greater confidence in response to these prompts the second time they were asked to complete the self-assessment in Week 7, with 91% and 94% of students responding with high confidence/autonomy, respectively (see Appendix).

This pattern, reflecting a perceived increase in confidence and autonomy in Week 7 responses, is consistent across the cohort, despite the number of responses varying significantly at both intervals (67 vs. 37 responses). The only skill area where perceived confidence/autonomy dropped the second time around was in response to item 17, 'I know when to disconnect from the digital environment' (74% vs. 59%). It is not clear why students would express a decline in confidence in this area, but one could speculate that as confidence rose in relation to the online environment, the ability to disconnect became a challenge.

15.7 Reflection

Upon reflection, we realised that there were some improvements that could be made to our approach to digital skill development with this cohort. One of the biggest considerations was the prior learning and experience of technology use this student cohort brought with them and how these students described their current capabilities. We realised that when completing the skills self-assessment, students were answering the questions based on the digital environments they were familiar with, rather than considering new and unfamiliar technologies. In short, students do not know what they do not know. We think these quotes from students characterise this:

> No, I have not improved, but it made me aware of what I do know – I haven't ventured into things I haven't done before. Just using PowerPoint, just basic. (Education student)
>
> I've grown up with technology my whole life and I built a computer when I was eleven… [but] I'm definitely much better at finding things on the internet now, like much, much better. I didn't really know about a lot of the search keys, like the asterisk which allows you to search for anything like the following suffix, very useful actually, very useful. (Science student)

In future iterations of the workshop, less common technologies will be used for exploration (i.e. robotics, augmented reality apps) to stretch students' prior understanding of what digital skills encompass. To support students who do not have a workshop such as this embedded in their units, there has been discussion of how students could use the DSD framework to reflect on their autonomy with digital technologies, so that they can identify their weaknesses and seek help in targeted areas. This is where the skills self-assessment could become very valuable.

15.8   Conclusion

In conclusion, in the Faculty of Education at Monash University, teaching degrees require accreditation from national bodies that seek digital skills to be developed in graduates (AITSL, 2017). It is expected that academics could use the DSD framework to guide their curriculum to ensure that expectations of student digital literacy match graduate ability. Where specialised digital tools are used, the DSD framework has the potential to inform how much guidance students might require from educators to become more independent using these tools. In our experience, the framework has also helped underpin library–faculty collaboration to address the challenge of making explicit the 'incremental development of digital skills and practices for collaborating, learning, researching, working, and functioning in society' (Torres et al., 2017). For library teaching staff, the DSD framework signals a range of potential applications, including but not limited to helping students understand where their digital skills lie in comparison to the expectations of their assignment requirements.

Appendix

Skill statement	No. of responses, 'With a little guidance from others' and 'With no guidance from others' (high confidence/autonomy) Week 1 (%)	No. of responses, 'With a little guidance from others' and 'With no guidance from others' (high confidence/autonomy) Week 7 (%)
1. I am able to identify my purpose for using technology	65	89
2. I am able to consider the implications of my digital practices (i.e. e-safety, digital wellbeing, digital profile and footprint)	65	83
3. I have the confidence to explore the functionality of a range of digital technology	52	83
4. I am curious to explore how digital tools can meet my needs	59	75
5. I am able to choose the appropriate digital technology for my needs	76	81

(continued)

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6. I am able to work out how to use digital technology unfamiliar to me	55	67.5
7. I have the ability to apply a range of digital options/tools to meet my various needs	62	67.5
8. I know how to choose digital technology informed by criteria that matches my requirements	58	81
9. I am able to reflect on my learning to improve my digital skills	70	75
10. I can adapt to a changing digital environment	71	75
11. I am able to judge the suitability of the technology I use	73	81
12. I am able to transfer my learning to new and unfamiliar digital contexts	62	78
13. I can manage myself and others in an online environment	77	86
14. I can use digital tools and strategies to organise and manage myself and others	77	78
15. I can manage my online identity and digital footprint	73	78
16. I can customise digital strategies and systems to suit myself and my team	52	73
17. I know when to disconnect from the digital environment	74	59
18. I can use digital technology to help me draw conclusions	65	89
19. I can solve problems in a digital environment	64	91
20. I have the confidence to try new ways of analysing information using digital formats	59	78

(continued)

21. I am aware of visual, sensory, kinaesthetic and psychomotor digital technologies for analysis, i.e. augmented reality	53	70
22. I am able to participate in online environments	84.5	91
23. I am able to share in online environments	76	94.5
24. I can collaborate and co-create with others in a range of digital environments	70	83
25. I am aware of e-protocols, my e-safety, digital wellbeing, profile and footprint	59	86

References

Australian Institute for Teaching and School Leadership [AITSL]. (2017). *Accredited programs list.* https://www.aitsl.edu.au/deliver-ite-programs/apl.

Bandaranaike, S., Willison, J. & Monash University Library. (2019, Rev. ed.). *Work skill development framework.* https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf.

Bennett, S. J., & Maton, K. (2010). Beyond the 'digital natives' debate: towards a more nuanced understanding of students' technology experiences. *Journal of Computer Assisted Learning*, *26(5)*, 321–331. https://doi.org/10.1111/j.1365-2729.2010.00360.x.

Cuban, L., Kirkpatrick, H., & Peck, C. (2001). High access and low use of technologies in high school classrooms: Explaining an apparent paradox. *American Educational Research Journal, 38*(4), 813–834. https://doi.org/10.3102/00028312038004813.

Duncan-Howell, J. (2012). Digital mismatch: Expectations and realities of digital competency amongst pre-service education students. *Australasian Journal of Educational Technology*, *28*(4), 827–840. https://doi.org/10.14742/ajet.819.

Margaryan, A., Littlejohn, A., Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, *56*(2), 429–440. https://doi.org/10.1016/j.compedu.2010.09.004.

Martin, A., & Grudziecki, J. (2006). DigEuLit: Concepts and tools for digital literacy development. *Innovation in Teaching and Learning in Information and Computer Science, 5*(4), 249–267. https://doi.org/10.11120/ital.2006.05040249.

McLeod, A., & Carabott, K. (2019). Who's teaching the teachers? Viewing the ICT content of a teaching degree through the eyes of pre-service teachers. In A. Tatnall (Ed.), *Encyclopedia of education and information technologies.* Springer International Publishing.

Murray, M. C., & Pérez, J. (2014). Unraveling the digital literacy paradox: How higher education fails at the fourth literacy. DigitalCommons@ Kennesaw State University. http://iisit.org/Vol11/IISITv11p085-100Murray0507.pdf.

National Assessment Program (NAP). (2018). *NAP Sample Assessment ICT Literacy.* Australian Curriculum, Assessment and Reporting Authority. https://www.nap.edu.au/docs/default-source/default-document-library/2017napictlreport_final.pdf?sfvrsn=2.

Prensky, M. (2001). Digital natives, digital immigrants, part 1. *On the Horizon, 9*(5), 3–6. https://doi.org/10.1108/10748120110424816.

Sánchez, J., Salinas, A., Contreras, D., & Meyer, E. (2011). Does the new digital generation of learners exist? A qualitative study. *British Journal of Educational Technology, 42*(4), 543–556. https://doi.org/10.1111/j.1467-8535.2010.01069.x.

Smith, L. (2011). Monash University Library and Learning: A New Paradigm for a New Age, *Australian Academic & Research Libraries*, *42*(3), 246–263. https://doi.org/10.1080/00048623.2011.10722235.

Torres, L., Bandaranaike, S., & Yates, S. (2014). '*What skills do I have? What skills will I need?' Building an employability skills profile through an online reflective learning program.* In: *Proceedings of the WACE 10th International Symposium on Cooperative and Work-Integrated Education. From: WACE 2014: 10th International Symposium on Cooperative and Work-Integrated Education*, 2–4 June 2014. Sweden: Trollhattan.

Torres, L., McLeod, A., Yazbeck, B., Rayner, G., Skrbis, M., Yates, S., Dickson, N., & Fulton, H. (2018). *Digital skill development framework.* https://www.monash.edu/__data/assets/pdf_file/0010/1652437/DSD-22.05.20.pdf.

Vygotsky, L. S. (1978). Interaction between learning and development (M. Lopez-Morillas, Trans.). In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in society: The development of higher psychological processes* (pp. 79–91). Cambridge: Harvard University Press.

Willison, J., & O'Regan, K. (2006, 2018). *Research skill development framework.* https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf.

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: A framework for students becoming researchers. *Higher Education Research & Development, 26*(4), 393–409. https://doi.org/10.1080/07294360701658609.

Willison, J., Sabir, F., & Thomas, J. (2016). Shifting dimensions of autonomy in students' research and employment. *Higher Education Research & Development, 36*(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216.

Willison, J. (2017). *The Models of Engaged Learning and Teaching (MELT).* Retrieved from https://www.adelaide.edu.au/melt/.

Willison, J. (2020). *The models of engaged learning and teaching: Connecting sophisticated thinking from early childhood to PhD.* Springer. https://doi.org/10.1007/978-981-15-2683-1.

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Chapter 16
Reinventing Placement Experience: Research Skills for Work-Integrated Learning in Public Health and Rehabilitation Counselling

Rosanna Ripoli, Lindsay B. Carey, Susan Chong, and Caroline Ondracek

Abstract This case study describes an initiative to embed evidence-based practice research skills into a workplace learning alternative at La Trobe University. Every year a cohort of undergraduate students in their final year of the Bachelor of Health Sciences are required to undertake a practice-based or work-integrated learning (WIL) placement. As part of this experience, academic teaching staff and librarians collaborate to provide students with extensive research skills practice by embedding an *Advanced Research Library Skills* (ARLS) training programme in the WIL placement.

16.1 Introduction and Background

As part of a tertiary curriculum, work-integrated learning (WIL) provides students with opportunities to 'increase work readiness' (Golding et al., 2019, p. 1). All Bachelor of Health Sciences (BHSc) students within the Department of Public Health at La Trobe University (La Trobe) undertake WIL opportunities as part of the 'Participatory Field Placement' (PFP) subject during their final year of study. This subject requires students to participate in a practice-based field placement which enables them to use the knowledge and skills acquired throughout their course in the specialities of Public Health, Health Promotion, Rehabilitation Counselling and Sports Counselling and Athlete Welfare.

PFP is a self-sourced placement model whereby students are supported by teaching staff to self-identify and obtain a placement in health-related human service organisations and agencies. For a variety of reasons, however, some students are

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unable to self-obtain placements and these students are offered the opportunity to participate in a unique initiative, the BHSc Participatory Field Placement Internship Program (PFP-IP), an alternative to a self-sourced placement that enables students to achieve the capstone work placement requirements of their degree.

The PFP-IP was initially trialled as an internship group cohort in 2010 by Dr Lindsay Carey at La Trobe's Palliative Care Unit and was further developed for BHSc students in 2015. The PFP-IP is a work-based programme that includes authentic professional research projects and progressive assessment. It runs through and extends beyond a 12-week semester. Students in PFP-IP are required to undertake the same assessments as those in the external placements. The assessments include completion of 80–100 hours of internship experience, a reflective journal, a critical continuous learning report and a research project report, which is subsequently made available to the sponsoring industry/organisation either as a report or publication.

In line with the best practice, the PFP-IP includes information and guidance to students with internship goals and expectations (Reding and O'Bryan 2013, p. 44). Placements are a key learning experience that prepares students to become human service practitioners and provides an opportunity to link knowledge, values, skills, critical thinking and self-development (Cleak & Wilson, 2018, p. 3). Part of this learning experience can include exposure to evidence-based knowledge, research skills and theories as part of professional practice in human service programmes (Cleak & Wilson, 2018, p. 4).

While the assessment for PFP-IP requires students to write a research report and present their findings, in 2015, the subject-intended learning outcomes (SILOs) for PFP-IP did not explicitly include research skills. However, students needed to build advanced research skills to be successful in this placement subject and the workplace. In the authors' discussions about the use of evidence-based practice (EBP) and its importance in health professionals' practice, we saw an opportunity for students to revise and practice these skills in a setting such as an internship. Our conversations led to the opportunity to collaboratively design the internship curriculum so that it not only focused on students' research skills but also reinvented the internship placement experience.

Research skills and knowledge of EBP are essential skills for health care practitioners, and we could see the importance of giving students opportunities to practise these skills in a workplace setting. When thinking about how to embed research skill development to reinvent the placement experience, we were also able to draw on our previous experience of collaborating on an EBP research skills session for a small group of undergraduate students undertaking an internship with the Australian Defence Force (Carey et al., 2016). This session provided guidance on how to source information for either literature or scoping review, how to use tools such as the PICO mnemonic (population or clinical problem, intervention, comparison and outcome) for concept mapping, database demonstrations and other relevant information (Erickson et al., 2018, p. 16).

16.2 Rationale

EBP requires health professionals to seek out the best available evidence to enable them to make decisions about clients' health or therapy, in the implementation of health programmes, or in devising the most effective disease-prevention methodologies (Erickson et al., 2018, p. vii). It also promotes and encourages self-reflection and an 'attitude of enquiry' (Erickson et al., 2018, p. vii). The importance of teaching EBP cannot be underestimated as these skills develop enquiry, teamwork and they connect theory and practice for students (Evenson, 2013, p. 298). Taking EBP skill development from the classroom to a professional setting emphasises that EBP is relevant to students' future employment.

PFP-IP demands skills and practical outputs that lead students to develop skills for future employment (Bobsaid et al., 2018, p. 5). Bobsaid et al. undertook a scoping review of the literature to explore the advantages, disadvantages and potential outcomes for students that took on internships as an alternative to an external placement (2018, p. 4). While an internal placement may not be considered equivalent to an external work placement by employers, in their scoping review Bobsaid et al. revealed that the literature demonstrates internships to be successful as these enhance participating students' technical skills as well as their professional and personal development, in turn preparing them for future employment (Bobsaid et al., 2018).

Students who undertake PFP-IP often write in groups. Working alongside peers, academics or external stakeholders and professionals, provides students with an opportunity to work together as a real workplace team. Students work with peers as well as colleagues and academics that are more experienced. Students are required to undertake a thorough and systematic search of the literature, locate the best evidence in order to complete their response to the research question. Then they present their findings and response to the research questions to their colleagues. This is an example where the activities that students undertake serve as a means to improve the readiness of potential graduates for their future employment activities (Bobsaid et al., 2018, p. 5).

16.3 Approach

In designing how to embed research skills development in the PFP-IP in the most coherent way, we developed the *Advanced Research Library Skills* (ARLS) training programme (Table 16.1). The programme steps were designed to be embedded at various points in the PFP-IP, starting with a compulsory workshop with a librarian during the 'Orientation Day' that introduces students to the internship and their projects. Learning outcomes in ARLS were taken from the Information Literacy Matrix (ILM) in the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019). The ARLS programme structured

Table 16.1 Outline of the ARLS programme

Embedded programme steps	Description of steps and student activities	Intended learning outcomes (as Articulated in the ILM)
Introduction	• Introduce the objectives of the workshop • Link the programme to the SILOs • Revise key concepts to students • Evidence-based practice—focusing on 'Ask an answerable practice-related question' (Erickson 2018, p. 6) & 'Acquire relevant evidence to answer the practice-related question (Erickson 2018, p. 6)'	• Asks appropriate questions to guide the enquiry • Determines nature and extent of information needed
Ask—Research question Search—Strategies/search techniques	• Revise the Qualitative or Quantitative research questions - Best search strategy as approach - Use of background information - Familiarity of key terminology - Key authors or researchers in the field • Revise the PICO protocol (see Table 16.2) • Use of an example clinical question and demonstrated to students using PICO • Students then create a search strategy in response to project question • Demonstrate Subject heading/keyword searching using Medical Subject Headings (MeSH headings) • Demonstrate citation searching	• Defines criteria for evaluating information from a critical perspective • Chooses advanced search concepts (synonyms, etc.) to describe a topic • Devises complex search strategies • Modifies the search strategy using synonyms, related terms and appropriate commands (e.g. Boolean operators) to refine results to meet the information need

(continued)

students' activities around EBP key concepts, within a five-step process (Erickson et al., 2018, p. 6; Hoffmann, 2013, p. 8). Some students were aware of this process if they had completed other Health Sciences subjects, e.g. 'Research and Evidence in Practice' in the first year or 'Integrating Evidence into Practice' in the second year. Students participated in all steps, using either their own projects as search examples or provided examples. Students were grouped into pairs and given projects briefs which were created and sourced by academics. Projects were based on health issues

Table 16.1 (continued)

Embedded programme steps	Description of steps and student activities	Intended learning outcomes (as Articulated in the ILM)
Acquire— Library Search explained Grey Literature for health— Searching databases	• Demonstrate La Trobe University Library's search tools via the website • Discuss other forms of reliable sources such as newspaper reports, government sites, statistics etc. • Demonstrate specific Health databases—Medline (OVID) & CINAHL (EBSCO) using PICO map (Table 16.2) or their own PICO map • Students create an account with key databases	• Independently identifies sources appropriate to discipline • Uses multiple sources types including primary sources • Considers if other sources should be used
Review of content	Students participate in a review quiz on the content covered above (to test learning progress with students)	
Organising references	• Overview of EndNote • Demonstration of referencing software Endnote	• Formats citation elements in an appropriate bibliographic style • Use in-text citations or footnotes appropriately • Formats citations in any given style as required • Utilises a bibliographic management system to organise retrieval and access of multiple reference (e.g. Endnote)

and project scenarios were aligned with specific disciplines, i.e. public health, health promotion, rehabilitation counselling or sports counselling and athlete welfare.

As part of rehearsing EBP, an example project scenario was used with all students—'For adults with Type II diabetes, is there evidence to support the benefits of strength training?'. With this answerable question, the students could practise how to utilise and break down the key concepts to search for the best evidence in the literature before starting on their own project. To devise a search strategy, they used the PICO mnemonic with the example project scenario (Table 16.2).

In Week 10 students presented their respective projects to their peers. This 15-min presentation required the student to reflect on their internship experiences. The intention was for this experience to provide 'opportunities for students to gain confidence speaking at public forums' (Cleak & Wilson, 2018, p. 104)—another essential workplace skill.

Table 16.2 Example of PICO categories for literature searches

P—Population or clinical problem		I—Intervention (this could be an exposure, test, prognos-tic factor or treatment)		C—Comparison (what you think the intervention is better or worse than, if relevant)		O—Outcome (outcome of interest for your client)
Adults 'type II diabetes' OR 'type 2 diabetes'	AND	'Strength training' OR 'Resistance training' OR 'Weight programme*'	AND	Not applicable	AND	Not applicable

16.4 Outcome

Because students worked with peers, academics and professionals in tier projects, several of the student's projects contributed to published studies (see Appendix). This was an invaluable outcome for students and an authentic experience of how research and writing for publication are part of professional life for health professionals. Students were required to utilise systematic EBP searching of the literature as part of each project and contributed their expertise in the development of a literature review to these publications (see Appendix).

The PFP-IP with *ARLS* embedded has been running for four years and we have enjoyed a productive relationship during that time that has resulted in modelling the collaborative writing and presenting that we want students to experience as part of PFP-IP (Carey et al. 2018).

16.5 Rosanna's Reflection

As a librarian with expertise and knowledge in EBP education, I was in a unique place to be able to contribute to students' research skill development in PFP-IP. Boruff and Harrison (2018) state that 'Librarians are experts in such knowledge and skills… and can be the model for future clinicians who will use such knowledge and skills in practice'. Student success in terms of research skill development is evident in their assessment outcomes. Added to this measure of success, upon completion of the workshop each year I provide evaluation forms to the students for feedback on the programme to inform continuous improvement the following year. Students usually comment on the value of having a refresher of EBP, PICO, how to use databases, such as MEDLINE, and referencing software—Endnote version X9. Some quotes from students:

- 'Very good rehash on library search strategy. Good description of Medline search, easy to understand and follow. Great explanation of EndNote.'
- 'Review & revising researching skills that had been learnt. Learning about EndNote—unheard of to me. Revising truncation/wildcards.'
- 'Maybe adding a quiz (Kahoot) to enforce what had been learnt and to add excitement to the lesson.'

Most students found the delivery and pace of the programme to suit their learning needs. For example, in 2018 in a cohort of 41 respondents, approximately 63 per cent strongly agreed that the delivery was clear and 68 per cent strongly agreed that the pace was right. The majority of students (approximately 70 per cent) indicated that they thought the content was a valuable part of the subject. Approximately 66 per cent of students agreed that they felt confident to apply the concepts of what they learnt to their studies. While students clearly found value in the programme (as the majority of their feedback suggests), I find that the practical application of concepts is not as consistent as I would have expected based on the learning outcomes and learning activities of ARLS. I attended the final workshop presentations by students, and I found it both rewarding and pleasing that many of them used PICO and EBP concepts in a systematic way. However, there were some students who didn't appear to have used the skills taught in the ARLS workshop session at all. Reflecting on this, improvements for the subject could be made across the three modes of student engagement outlined in the LLTP Framework, i.e. learner–content interaction, learner–teacher interaction and learner–learner interaction. First, in the learner–content mode, I would like to add more self-help resources to the LMS for students to use pre- and post-programme attendance, including open educational resources such as the *Research and Evidence in Practice* ebook (Erickson et al., 2018), additional examples of how to apply PICO to a research question in this context, and a pre-task for completion before the students attend the programme.

Secondly, to improve learner–learner interaction, students could continue to create a PICO map as a component of the programme, and I would like to incorporate a peer-review activity, whereby students provide each other with feedback on their PICO search strategies. Finally, to improve learner–teacher interaction, it would be valuable to provide students with more class time for using the PICO mnemonic tool, and more library staff available in this time to answer students' questions and to provide feedback. This is the time that students can use to get started with their project, with support from librarians in the room.

There may be a range of reasons why some students didn't appear to have used the skills taught in the ARLS workshop in their final presentations and this needs to be fully investigated by taking an evidence-based approach. In the short term, however, I continued to periodically test the students' knowledge and learnings through the ARLS programme. Based on student suggestions I improved the ARLS by incorporating a short seven-question quiz using an online platform which I used previously in other library sessions. I find this is a useful tool to test their learning against the ILM as it is engaging and a competitive and fun game.

16.6   Conclusion

Reinventing the placement experience through La Trobe's PFP-IP has proven successful. More recently, the internship programme has demonstrated its flexibility during COVID-19 social restrictions and has been conducted as a 'virtual' field placement while still achieving all the required learning outcomes. Embedding ARLS in PFP-IP adds value to the internship experience for students and plays a pivotal role in the development of key skills that students will need as health professionals. A key element of the programme includes specific EBP and research skills that develop enquiry, teamwork and make explicit to students the connection between theory and practice. The LLTP Framework clearly outlines the importance of collaborative relationships between subject coordinators and librarians to prepare students for academic success and professional research activity. Collaboration has been crucial in reinventing the placement experience for our public health students.

The value of adding the ARLS programme and its alignment with the internship research strategy was clear to us and it has been a success. The combination of embedding the EBP skill development and the research projects themselves has allowed students to practise skills. Furthermore, this combination has enhanced students' professional and personal development and their potential employability. The PFP-IP subject also utilises an individualised learning approach, based on personal development and self-awareness, while emphasising the development of the reflective learning skills necessary in work settings and life-long learning. We are committed to working together to continue to refine and improve the delivery of the ARLS programme and align it to the internship activities, therefore contributing to students' overall internship experience and their employability.

Appendix: Examples of Student WIL Internship Projects by Topic Area

Topic area	WIL project	Authors
Aboriginal/Indigenous	Camel commercialisation[a] This report is an exploratory scoping literature review prepared for the National Indigenous Australians Agency (NIAA Goldfields Esperance Region) by undergraduate La Trobe University health science students	Hanslow-Sells et al., (2019)
Defence force	Moral injury [c]# This scoping review considers the role of chaplains with regard to 'moral injury'	Carey et al., (2016) Hodgson and Carey (2017)
Educational framework	Response to intervention [a] This scoping review identified and synthesised evidence regarding the effectiveness of the "Response to Intervention" (RTI) model within Australian schools	Misso, et al. (2020)
Global citizenship	Global Citizenship—Cultural, Religious and Spiritual Dynamics [a] # This paper seeks to provide an exploration of the interplay between global citizenship, culture, religion and spirituality	Millar, Ly, McLaren et al. (2020)
Hospital services	CALD patients[a] The purpose of this paper is to (i) consider international literature with regard to culturally and linguistically diverse (CALD) patients and their length of stay (LOS) and/or unplanned readmissions to healthcare; and (ii) consider a hospital case study of CALD data and factors that might affect LOS and/or readmissions for CALD patients	Millar et al., (2016)

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Topic area	WIL project	Authors
Occupational ergonomics	Ergonomics & Spiritual Care[b] This chapter explores the relationship between meaningful work and health, well-being and job performance, and how spirituality in its varied expressions may be used to enrich the experience of contemporary workplaces	Stuckey and Brown, (2018)
Otolaryngology	Saliva hypernatrium[a] This scoping review explores the available peer-reviewed literature, medical/health information management records, case studies, expert opinions in the field of otolaryngology, and other relevant resources relating to the condition of idiopathic persistent and excessive salty tasting saliva	Danskin et al., (2019)
Palliative care	Death anxiety[a] This exploratory literature scoping review investigates the health issues surrounding 'death anxiety' and considers whether risky behaviour of young adults is a direct consequence of death anxiety particularly with respect to their 'gender'	Chahda et al., (2018)
Pharmacy	Pharmacy & Holistic Care[a] The purpose of this research is to explore pharmacy and the role of pharmacists with regard to holistic care within clinical settings and pharmacy curriculum	Delic et al., 2018
Primary education	Language and literacy[a] The purpose of this review is to explore current evidence for the 'pull-out' compared to the 'push-in' methods of language intervention for improving academic and social outcomes for children and adolescence with disabilities and/or learning difficulties	Carey-Sargeant et al., (2017)

(continued)

Topic area	WIL project	Authors
Prosthetics & orthotics	Prosthetics, orthotics & spiritual care[b] This project considers the literature regarding a holistic-care approach in rehabilitation, with a particular focus on the use of spiritual care in prosthetic and orthotics	Carey et al., (2017) Fisher et al., (2018)
Rehabilitation counselling	Rehabilitation & holistic care[a]# The purpose of this scoping review is to explore the literature regarding holistic care in rehabilitation case management settings	Birch et al., (2018)
Speech pathology	Telehealth[a] The utilisation of telehealth services in speech-language pathology is increasing and becoming more accessible to individuals. This review aims to explore the effects of telehealth on speech-language pathology outcomes	Krikheli et al., (2017)
Tertiary education	Internships[a]# This review explores the literature relating to the advantages, disadvantages and potential outcomes in students partaking in an internship program, as an alternative to securing an external field placement	Bobsaid et al., (2018)

Note Published as: [a]report; [b]book chapter; [c]refereed article; utilised for secondary publication #

References

Birch, A. P., Mohamed, H., Heath, A., Carey, L. B., Kirkheli, L., Kay, M., & Drakopoulos, E. (2018). *Rehabilitation counselling and holistic care: An exploratory review*. Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/567139

Bobsaid, A., Carey, L. B., Krikheli, L., Ripoli, R., Kay, M., Chong, S. A., et al. (2018). *Reinventing internships: An exploratory scoping review*. Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/566099

Boruff, J. T., & Harrison, P. (2018). Assessment of knowledge and skills in information literacy instruction for rehabilitation sciences students: A scoping review. *Journal of the Medical Library Association, 106*(1), 15–37. https://doi.org/10.5195/JMLA.2018.227

Carey-Sargeant, C. L., Krikheli, L., Carey, L. B., Vural, T., & Hon, Y. (2017). *Language and literacy: An exploratory scoping review regarding the 'push-in' and 'pull-out' intervention methods.* Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/563253

Carey, L. B., Hodgson, T. J., Krikheli, L., Soh, R. Y., Armour, A. R., Singh, T. K., & Impiombato, C. G. (2016). Moral injury, spiritual care and the role of chaplains: An exploratory scoping review of literature and resources. *Journal of Religion and Health, 55*(4), 1218–1245. https://doi.org/10.1007/s10943-016-0231-x

Carey, L. B., Kirkheli, L., Iaconis, A., & Toll, Z. (2017). *Prosthetics, orthotics and spiritual care: A literature scoping review.* Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/563255

Carey, L. B., Ripoli, R., Krikheli, L., Chong, S. A., Carey-Sargeant, C. L., & Bobsaid, A. (2018, October 3–5). *Reinventing internships: An alternative to external field placements.* [Paper presentation]. ACEN Work Integrated Learning Conference: Creating Connections, Building Futures, Brisbane Convention Centre, Brisbane, Queensland, Australia.

Chahda, L., Al Dhufari, U., Ngatiran, S. E., Carey, L. B., Krikheli, L., & Kay, M. (2018). *Risky behaviour and death anxiety among young adults: An exploratory scoping review.* Retrieved from http://hdl.handle.net/1959.9/566147

Cleak, H., & Wilson, J. (2018). *Making the most of field placement.* Melbourne: Cengage.

Danskin, C., Carey, L. B., Carey-Sargeant, C. L., Krikheli, L., Drakopoulos, E., Heath, A., & Vargas, C. (2019). *Saliva hypernatrium: An exploratory scoping review*. Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/568632

Delic, N., Carey, L. B., Krikheli, L., Kay, M., & Carey-Sargeant, C. L. (2018). *Pharmacy and holistic care: An exploratory scoping review*. Bundoora: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/566107

Erickson, S., Karasmanis, S., Hodgkin, S., & Murley, G. (2018). *Research and evidence in practice.* Melbourne: La Trobe eBureau, La Trobe University. https://doi.org/10.26826/1007

Evenson, M. E. (2013). Preparing for fieldwork: Students' perceptions of their readiness to provide evidence-based practice. *Work, 44*(3), 297–306. https://doi.org/10.3233/wor-121506

Fisher, K., Francis, A., & Collins, N. (2018). Prosthetics, orthotics and spiritual care. In *Spiritual care for allied health practice: A person-centered approach* (pp. 207–228). Philadelphia: Jessica Kingsley Publishers. https://doi.org/10.4225/22/5ae18534bbac0

Golding, R. M., Breen, L. J., Krause, A. E., & Allen, P. J. (2019). The summer undergraduate research experience as a work-integrated learning opportunity and potential pathway to publication in psychology. *Frontiers in Psychology, 10*, 541. https://doi.org/10.3389/fpsyg.2019.00541

Hanslow-Sells, E., Perry, D., Carey, L. B., Kirkheli, L., Drakopoulos, E., Heath, A., & Vargas, C. (2019). *Camel commercialisation in the goldfields region of Western Australia: An exploratory scoping review*. Bundoora: La Trobe University. Retrieved from https://doi.org/10.26181/5dc507bd598ed

Hodgson, T. J., & Carey, L. B. (2017). Moral injury and definitional clarity: Betrayal, spirituality and the role of Chaplains. *Journal of Religion and Health, 56*(4), 1212–1228. https://doi.org/10.1007/s10943-017-0407-z

Hoffmann, T. (2013). *Evidence-based practice across the health professions.* Chatswood, NSW: Elsevier Australia.

Krikheli, L., Carey, L. B., McDonald, C. E., & Abdu, N. M. (2017). *Telehealth use in speech-language pathology: an exploratory scoping review (prepared for Cabrini Health, Victoria).* Melbourne: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/563260

La Trobe University Library. (2019). *Library learning and teaching partnership framework.* Melbourne: La Trobe University. https://doi.org/10.26181/6051815fa87e4

Millar, C., Carey, L. B., Liu, C., & Liu, Y. (2016). *'CALD patients' length of stay and unplanned readmissions: An exploratory review of international literature and Alfred Health Services—A participatory field placement collaboration report'*. Bundoora: La Trobe University. Retrieved from http://hdl.handle.net/1959.9/561228

Millar, C., Ly, A., McLaren, P. O., Avgoulas, M., Carey, L. B., Drakopoulos, E. (2020). Global citizenship—Cultural, religious and spiritual dynamics: an exploratory scoping review. La Trobe. Report. https://doi.org/10.26181/5fbc4a32accd2

Misso, E. F., Coli, O. A., Drakopoulos, E., Carey, C. L., Carey, L. B. (2020). The "Response to Intervention" model and the role of the speech-language pathologists within schools: A literature scoping review. La Trobe. Report. https://doi.org/10.26181/5fbaea3f23f60

Reding, K. F., & O'Bryan, D. (2013). 10 best practices for business student internships. *Strategic Finance, 95*(10), 43–48.

Stuckey, R., & Brown, J. W. (2018). Occupational ergonomics and spiritual care. In Carey, L. B. & Mathisen, B. A. (Eds.), *Spiritual care for allied health practice: A person-centered approach* (pp. 183–206). Philadelphia: Jessica Kingsley Publishers. https://doi.org/10.4225/22/5ae1823b432ea

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Chapter 17
Broadening Students' Employability Horizons: A Korean Studies Library Internship Program

Anita Dewi, Jung-Sim Kim, and Andrew David Jackson

Abstract To enhance the employability skills of Korean Studies students of Monash University's Faculty of Arts, a Library Internship Program was developed as a collaboration between the Faculty of Arts' Korean Studies Program and Monash University Library. This chapter presents a critical reflection on the implementation of the Work Skill Development (WSD) framework in the internship from the perspectives of the host supervisors, the academic convenor of Korean Studies and the student interns. We address the internship against the WSD framework to provide a comprehensive understanding of how it facilitated the implementation and enabled the success of this program.

17.1 Introduction

The Korean Studies Library Internship Program was established to enhance the employability skills of students undertaking a major, minor or diploma in Korean Studies. A key aspect of the initiative was to broaden students' horizons so that they did not limit their career potential to traditional sectors and employment markets after completing a Korean Studies major, minor or diploma. The program itself is a unique collaboration between Monash University Library (MUL) and the Korean Studies Program of the Faculty of Arts at Monash University (the faculty). This is in addition to the pre-existing and long-standing collaborative relationship between the faculty and MUL through academic and research skills development programs and initiatives as well as research support provided for Korean Studies academics by

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The collaborative initiative we describe was initially presented as part of a high-profile 5-year project funded by the Academy of Korean Studies (AKS) that the Korean Studies Program secured for 5 consecutive years, commencing in 2017. The project itself has a number of aims, which include supporting high-level research on Korea and related areas, increasing student numbers at graduate and undergraduate levels, improving the learning experience and employability of Monash Korean Studies students and fostering greater interest in Korean Studies at Monash and more broadly across the Melbourne area. The main driver behind our collaboration relates to the aim noted above seeking to improve the learning experience and employability skills of students undertaking Korean Studies at Monash University.

Following the decision to proceed with the Library Internship Program, a number of steps needed to be taken as part of the recruitment process. First, we developed a position description (see Appendix A in this chapter) and interview questions (see Appendix B, also in this chapter) together with the relevant MUL team, consisting of the Library Manager from the Sir Louis Matheson Library, the Learning Skills Adviser for Asian Studies and languages and the Subject Librarian for Korean Studies. This was used as the internship advertisement that was placed via the university Work Integrated Learning (WIL) platform. This position description was very specific and included special criteria stating the requirement of Korean Studies knowledge and Korean language skills. After intensive discussions with the faculty WIL coordinator, we agreed to establish the internship as a six-credit-point unit for students undertaking a major, minor or diploma in Korean Studies. During each internship period, the Learning Skills Adviser for Asian Studies and languages and the Subject Librarian for Korean Studies were designated as host supervisors for the student interns. Upon completing the internship, students would be eligible to count these points towards their completion of a Korean Studies major.

In the planning, design and implementation stages of this internship, we used the Work Skill Development (WSD) framework (Bandaranaike, S., Willison, J. & Monash University Library; 2019) as a basis for our ideas. To provide a logical explanation for how the WSD framework facilitates the internship program, we present this chapter in sections of rationale, method, outcomes and reflections.

17.2 The Application of the WSD Framework to the Internship Program

We used the WSD framework for the Korean Studies Library Internship Program. While a number of frameworks are targeted for WIL (D'Angelo, 2012; Hall-Ellis & Grealy, 2013), the WSD framework was specifically developed to assess how interns performed in a WIL setting. The decision to incorporate the WSD framework in the conceptualisation, planning, implementation and evaluation of the internship was

based on the consideration of relevant work skills that students needed to acquire as well as the level of independence or autonomy that students experience during their internships in relation to these skills. In addition, the success of the WSD as a learning and teaching model applied in other contexts of Work Integrated Learning (WIL) (Bandaranaike, 2018) augured well to apply the WSD to inform our internship. As Bandaranaike and Willison state, the WSD acts as 'an innovative conceptual tool which integrates key employability skills and graduate attributes into WIL' (29 September–1 October 2010, p. 1). In the context of Monash University, the internship is also in line with the strategic institutional agenda, which sets out to prepare graduates to enter the job market with high-level vocational skills. In particular, the internship fulfils the 'incorporating rich experiences' aspect of Monash University's Focus Education Agenda (Monash University, 2018, pp. 10–11).

The WSD framework proved to be contextually adaptable and suitable for the Korean Studies Library Internship Program. The WSD also offered the means to not only describe what professional skills for the workplace entail to interns and educators alike but to also show how these skills can be developed over time to increased levels of independence. Furthermore, the WSD framework provided a way to guide the approach for 'a purposefully and collaboratively designed WIL skills curricula for effective engagement in workplace settings and for future employment' (Torres et al., 2014, p. 2). Of particular relevance to the internship initiative, is the way in which the WSD framework 'brings together learner outcomes—the knowledge and skills gained from undergraduate studies, consolidates graduate attribute outcomes, and articulates the skills and knowledge required to operate in public and private enterprise' (Bandaranaike & Willison, 2010).

The WSD framework was, therefore, applied as a way to chart and monitor the interns work skills by identifying where the interns were positioned along the autonomy continuum on commencement of the internship and then evaluating how each intern developed each of the skills in the WSD framework's 'Work Skill Facets' by the end of the internship experience.

17.3 Planning, Designing and Implementing the Internship

A number of people were actively involved and committed to the planning, design and implementation of this internship. These people included the Convenor of Korean Studies; the Subject Librarian for Korean Studies; and the Learning Skills Adviser for Asian Studies and languages; as well as one of Monash University Library branch managers where MUL's Korean Collection is held. The Convenor of Korean Studies was instrumental in setting up the internship and budgeting costs from the Academy of Korean Studies (AKS) project grant to support the library's involvement in the internship. He also helped market the internship position to the students and the AKS. The Subject Librarian for Korean Studies, the Library Manager and the Learning Skills Adviser for Asian Studies and languages were instrumental in developing the

position description, the host institution recruitment process and the host supervision during the Library Internship periods.

As mentioned earlier, the development of a position description was required prior to advertising the internship. After being widely advertised through appropriate Monash University WIL channels, the next step was for interested students to undertake the university WIL recruitment process. As part of this process, students were asked to apply for the internship opportunity by responding to the position description (see Appendix A in this chapter). This involved submitting a video recording of them answering a number of questions to determine what motivated them to apply for the internship. Candidates who successfully completed this stage of the university's WIL recruitment process were then shortlisted to undergo a second round of interviews with MUL host supervisors and the Convenor of Korean Studies. Each interview lasted 30–45 min during which time candidates were asked questions based on the internship position description (see Appendix B in this chapter).

Having passed the recruitment process, two successful students came on board and joined the Korean Studies Library Internship Program in the second semester of 2018. The interns worked one day per week with the Korean Collection at the library and also became part of the Research and Learning team in the library. They were allocated desks in an open-plan office alongside subject librarians, librarians, learning skills advisers and the library's information officer. With the success of the first round of recruitment, a second round was undertaken during the winter semester break of 2019, from which one student successfully undertook an intensive 3-day-a-week internship for a period of 4 weeks.

It must be noted here that the Korean Studies interns were not Librarianship placement students, as frequently hosted by MUL, and therefore, had no knowledge of library practices and roles. The interns all shared knowledge of Koreans studies, but their disciplinary backgrounds were diverse. For example, one of the two Korean Studies interns in the second semester of 2018 was undertaking a double degree in Business and Arts, and majoring in Korean for Arts and Marketing for Business. The other intern was taking a double degree in Commerce and Arts, majoring in Finance and Journalism with a minor in Korean. The intern from the second round in the 2019 winter semester was an undergraduate Arts student majoring in Korean Studies. Although the interns had not previously studied Librarianship, the intention of working in the library was for the interns to bring their knowledge of Korean studies to the fore in a range of tasks that supported the work of specialist librarians from the Asian Studies Collection. In this way interns experienced how their Korean language and knowledge skills transferred to a library context. For example, in both internship periods, the students' tasks were to improve the item descriptions of Korean collection records, so that Korean language library resources could be searched more easily by students. To undertake these tasks, the interns applied their Korean language skills and Korean studies knowledge.

The interns worked alongside their library colleagues as valued team members. They were provided with their own workstations, encouraged to make active contributions to workplace meetings and met weekly with their supervisors, as it is customary for library staff to do. In this way, they could discuss any work-related matters

including how their internships and associated assessment tasks were progressing. The interns also participated in a Korean Studies conference and seminars hosted by the library in collaboration with the Faculty of Arts, Korean Studies Program. Facilitated by project funding, our interns were also given the opportunity to attend a professional development training session. This provided interns with a more authentic experience of a professional workplace as library employees are also required to attend professional development training sessions. In this way, the interns demonstrated a high level of autonomy and independence in how they contributed to and participated in library activities related to their roles.

This is a significant point of difference between the Internship Program we describe and internships from other industries (Daniel & Daniel, 2013; Jackson et al., 2017; Junqueira & Matoti, 2013; Sonnenschein et al., 2019). As the host supervisors in our Internship Program are educators working in an educational context, the emphasis of our Program is to provide a learning opportunity for student interns and to experience how Korean language and knowledge skills can be valued and applied in an educational workplace setting.

In the planning, design and implementation of the Internship Program, the WSD framework was applied across all stages of the initiative, from recruitment to the final debriefing session at the end of the program. Host supervisors undertook very careful planning that considered the WSD's work skills (vertical axis) in relation to autonomy descriptors (horizontal axis). At the beginning of the Internship Program, for example, we used the WSD framework to identify that the interns would require *Scaffolded Direction* from library supervisors in relation to the work skills they would be performing in their internship roles.

17.4 Outcomes

On completion of the Internship Program, we undertook semi-structured interviews with the students who had participated to determine the strengths of the program and how future programs could be improved. We also gathered detailed opinions, different perspectives, viewpoints and reflections of host supervisors and the Convenor of Korean Studies who were involved in developing and coordinating the Internship Program.

The key objective for those of us involved in establishing this program has always been to provide a real-life professional experience to our student interns. It became clear from interpreting the interview data gathered on completion of the internship and in considering our reflections as host supervisors that the application of the WSD framework to the internship experience resulted in both positive and surprising outcomes. On the commencement of the internship, for example, we expected that the interns would require *Scaffolded Direction* from host supervisors across all Work Skill Facets in the WSD framework. This concurred for three of the facets, namely, *Resourceful and Informed, Planning and Management* and *Critical Reasoning and Problem Solving*. However, what was surprising was that the interns demonstrated

that their skill levels exceeded the initial *Scaffolded* benchmark identified by their supervisors on commencement of the Internship Program for *Initiative and Goal-oriented, Learning and Reflecting* and *Communication and Teamwork*. The interns' ability to conduct themselves with greater independence than initially anticipated was clearly apparent from the way they completed their work during the internship. Furthermore, the assessment tasks that were part of the internship unit clearly demonstrated their ability to perform tasks that align with *Open-Ended* autonomy. Therefore, the WSD framework was instrumental in assisting host supervisors to identify a mismatch in how much perceived guidance the interns required from supervisors on commencement of the program, as in fact, students had the ability to perform with greater self-reliance in relation to certain skills than initially expected (Fig. 17.1).

From the interns' point of view, it was clear that the internship met the students' expectations by providing a positive real-life experience in the workplace. Dylan (pseudonym, Intern 1) suggested that the reasons they applied for the internship were to 'experience new things, especially [if they are] Korean related [and] have experience in a workplace'. Likewise, Bailey (pseudonym, Intern 2) suggested, 'it's convenient for me, because it's at uni[versity] and working with Korean uni staff as
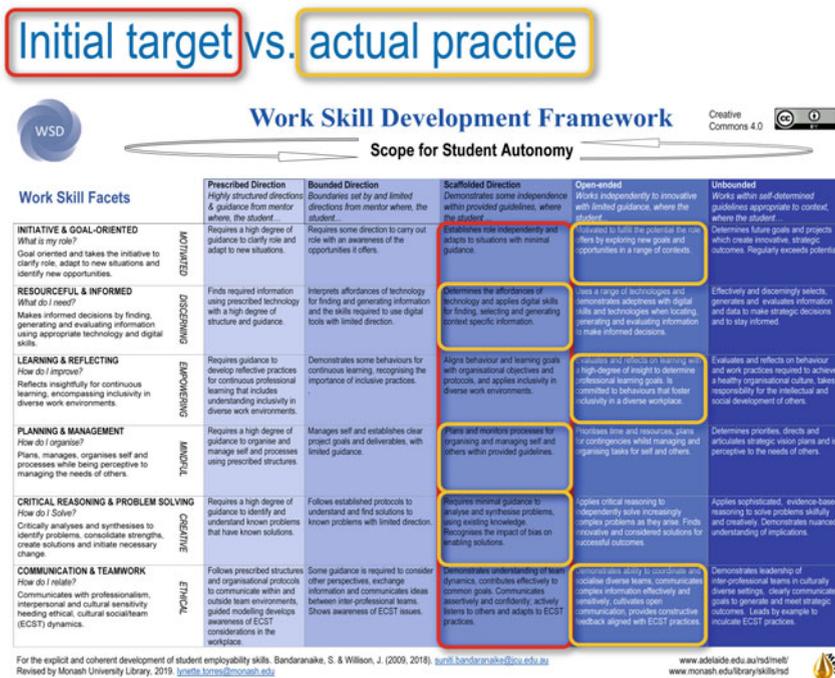
Fig. 17.1 Initial target vs actual skills of students in the internship program. Work Skill Development (WSD) framework (Bandaranaike, S., Willison, J. & Monash University Library; 2019). Reproduced with permission

well. It was like a network of opportunity. We got to attend conference[s] and that kind of thing, it was very interesting. So, I thought it was a good opportunity'. In line with our expectations, Dylan and Bailey also mentioned the following when asked about what they had learned from the internship:

> **Dylan:** mainly communication in a professional environment, because I've never really been in that kind of situation. I've done part-time work in a restaurant, but it's not really like…-working with teams, perhaps…and getting to know collaboration. Working with different departments in a professional manner.

> **Bailey:** When I knew it was a Library Internship, I guessed that I would be learning about the Library in itself. What I really did was learn about the different divisions within the uni as well, about what the research and learning staff do…I was also able to pair that up with Korean Studies, which I think is a very interesting opportunity, because not many people would be able to study Korean or language, and then think that they would be able to go through the language course and do a sort of internship in between, like a different field other than teaching or something like that.

The students above clearly displayed work skills relating to the *Initiative and Goal-oriented* facet at *Open-ended* autonomy. We realised this during the first meeting with the interns, which surprised us as we expected students to be at the *Scaffolded* autonomy level for this facet. In fact, they needed no guidance in setting up goals.

Upon exploring the more practical aspects of the internship, it became clear through our conversation with both Dylan and Bailey that our expectations in terms of students' autonomy for the *Planning and Management* facet were in alignment. We all identified that this skill range lay in the *Scaffolded* area of student autonomy. In their reflection on the induction during the initial meeting, both Dylan and Bailey appreciated the guidance they were given towards *Planning and Managing*, as indicated in their comments below.

> **Dylan:** Getting to know what each person's role is, I think that's quite helpful...We also had a timeline on what we had to do during the day. I think that was pretty helpful, so we know what's going on. When we're starting and what's next…so we can get prepared.

> **Bailey:** We got to know more about them [Library staff], as well as their roles. I thought it was really good. I think it's useful to have an initial meeting, because it gives you an idea where to go.

Similarly, the one-to-one catch-up meetings between host supervisors and student interns highlighted the importance of these meetings for developing students' skills related to *Critical Reasoning and Problem Solving*. The level of guidance provided by the supervisor demonstrated a *Scaffolded* level of autonomy. We felt that the catch-up meetings allowed us to understand the interns' situations better, and at times helped us to guide them in solving problems. Both interns also interpreted the catch-ups in a similar way, as suggested in their responses below.

> **Dylan:** These meetings are good for recording what you've been doing. If you're doing something wrong, your supervisors can talk about it and if there is any confusion, students can also ask about it. We can solve any problem that we might have.

> **Bailey:** It was very good to have the monthly catch-ups, because it gave us, the interns, time to talk about our own opinions of the experience, whether it would be the work or maybe just insights as well, like when I went to the meeting that we had last time. I think we also

talked about the assignments that we had for the internship unit that we did for the academic credit. That was good too, because you would feel that you'd have support and backing there when you needed it.

We also found that *Scaffolded* guidance provided by the supervisors did align with the student requirements for being *Resourceful and Informed*. The subject librarian prepared a clear guidance program for the interns to find library records with or without Korean characters, then type Korean characters in the spreadsheet to order the data. The guidance was understood and appreciated by the interns, as they thought they would not be able to learn it otherwise. They commented:

> **Dylan:** We need to type in Korean…Sometimes we needed to identify the books in the Roman alphabet. I never learned Romanisation before the internship, but I guess by knowing Korean characters, but sometimes when you collect books you could read the titles and authors' names in case you collect the wrong books.

> **Bailey:** You need to have a good foundation in at least basic Korean in order to understand how to input the sort of things you're looking for, so like author, publisher, year, that kind of thing. And after a few weeks we got more confident with the process, and you can always ask questions as well. I think you did need to have Korean language skills to be able to follow the internship.

Finally, on completion of the internship, both student interns demonstrated an *Open-ended* level of autonomy in the way they carried out their roles. They showed that they understood sophisticated concepts such as collaboration. For example, they were perceptive to the needs of colleagues at the library's Research and Learning Point, where student consultations take place. Within the diverse team, they approached colleagues and were sensitive to picking up collaborative work concepts that were in line with their roles. Bailey, for example, independently took the initiative to organise students who required consultations at the research and learning point, to help make the task of skills advisers and librarians more manageable. In terms of *Learning and Reflecting*, an elaborative reflection was expressed by Bailey as follows:

> These days it's very hard to get a job…it is a Korean Studies internship, so you have to use your Korean, so it does improve your employability, knowing that you've been in a workplace where you have to use your language skills, and I guess somehow improve them from that point on. I believe the process develops employability skills, because you learn teamwork…looking around the office, you see the hard work, the responsibility…that you have to have every day when you go on to your career.

17.5 Academic Convenors and Host Supervisors' Reflection on the Initiative

Reflecting on the experience, we concluded that the internship represents an excellent initiative. It is beneficial and highly valuable, both for the student interns and the host institution. One thing that we learned from the experience and would want to change in practice relates to the supervisory load on the host supervisors. For the future,

we need to reconsider how manageable and sustainable the supervision is in making decisions about the number of interns and the frequency of hosting them.

The WSD framework has been very valuable for us in planning, implementing and reflecting on the Internship Program. We have been able to use it as a way to chart and monitor the interns' work skills by identifying where the interns were positioned along the autonomy continuum on commencement of the internship and then evaluating how each intern's work skills had progressed on completion of the internship experience. This information will help us to plan how we align our skill and autonomy expectations for future internship programs.

Overall, we can conclude that the internship scheme could be applicable to other library contexts, perhaps with contextual and situational adjustments according to the types of work done in different settings. We also strongly recommend that Library Internship Programs be conducted elsewhere, both in academic and public Galleries, Libraries, Archives and Museums (GLAM) sectors. Our experience strongly advocates applying the WSD framework to such initiatives for the benefits the tool provides in making work skills and their development visible and overt to all involved. The significance of the WSD framework, therefore, lies in guiding skill development programs aiming to broaden university student horizons for employability and life after university.

Appendix 1

Position Description.

Position Description	
Company	Monash University Library
Main contact	Name: xxx xxx Email: xxx.xxx@monash.edu Phone: xxxx xxxx Position: xxx
Intern supervisor *If different to main contact*	Name: xxx xxx Email: xxx.xxx@monash.edu Phone: xxxx xxxx Position: xxx

(continued)

(continued)

Position Description	
Company	Monash University Library
Company address	Monash University Library, 44 Exhibition Walk, Clayton, VIC 3800
Brief description of the company	Monash University Library is one of Australia's leading academic libraries with a long-standing reputation for a comprehensive collection, technological innovation and professional excellence. We strengthen the University by providing outstanding scholarly resources and research and learning environments and through leadership in research skills development, scholarly communication and use of technology. For more on the work we do, please visit our website
Internship title	Library internship Focus area: Korean Studies
Number of intern/s required:	1–2/semester
Recommended Disciplines: *If there is a preference for students from some disciplines*	Korean Language / Korean Studies
Undergraduate/Graduate *If there is a preference for level of study*	Undergraduate

(continued)

(continued)

Position Description	
Company	Monash University Library
Key tasks *Pick a few tasks from the suggested list that are relevant to the internship and delete the rest* *Add comments next to task if required, and/or add your own additional tasks*	**General:** Interns may undertake several of the following key tasks: Contribute to publications, i.e. blogs, newsletters Event planning, support and delivery Community/stakeholder engagement Create digital and social media content Data management Campaign support Video and audio Developing or evaluating resources e.g. for clients, events, websites Program support in culturally diverse communities **Specific:** Intern requires Korean language competence, to be involved in Korean collection development and management under the supervision of Korean Studies Subject Librarian. Rather than strictly working on project(s), the intern will be working on different activities including, but not limited to, the following: • finding items as well as updating and adding descriptions in the catalogue using Korean characters • checking library records • reviewing current online learning objects • Intake winter (June to July): supporting the 21st Biennial Meeting of the International Circle of Korean Linguistics (ICKL21) held at Monash University, 10–12 July 2019 • Intake second semester project: *Research in Australia on Korean Studies resources*
Key skills *Pick a few key skills from the suggested list that are relevant to the internship and delete the rest* *Add comments and/or additional skills if required*	**General:** Planning, organisation and time management skills Interpersonal and intercultural skills Analytical and problem-solving skills Oral and written communication skills Comfortable using a range of technologies Ability to work in a team **Specific:** Korean language competence

(continued)

Position Description	
Company	Monash University Library
Key attributes *Pick a few key attributes from the suggested list that are relevant to the internship and delete the rest* *Add comments if required*	Team player Shows initiative Works independently (without requiring close supervision) Accountable, punctual and reliable Curious Creative Analytical thinker Adaptability
Intake and length *(if known)* **i.e. Semester 1 (February)** **Winter (June to July)** **Semester 2 (July)** **Summer A (November)** **Summer B (January)**	Intake/or start and end date: Winter (June to July) Duration and days: 6 CP internship, equivalent to 4 full days or 29.4 h per week during winter break (4 weeks; June to July) Work schedule to be negotiated with the intern supervisor

Appendix 2

Student intern interview questions:

1. Please tell us about yourself.
2. When did you do the internship in the library?
3. Why did you apply for the internship?
4. What did you want to learn from the internship? What experience did you want to gain?
5. Prior to being accepted to do your internship in the library, you went through a few steps that were similar to a professional recruitment process, including submitting an application form and attending an interview. What do you think about this process?
6. As you know, at the beginning of the internship period, we had an initial meeting with student interns and host supervisors attending. What do you think about this initial meeting? Was it useful? Why or why not?
7. During the internship period, we organised regular catch-ups between us. How do you find these catch-ups? Were they useful? Why or why not?
8. As part of your internship, we identified training that we thought would suit your professional development needs. Which training did you attend? Did you find it useful? Why or why not?
9. At the end of your internship, we had a debrief meeting. What do you think about the debrief meeting? Was it useful? Why or why not?
10. What Korean language/studies unit have you taken or are you taking?

11.   Do you think your background knowledge/skill in Korean language/studies helped you in doing the internship? Why or why not?

12.   Do you have any other comments or feedback?

References

Bandaranaike, S. (2018). From research skill development to work skill development. *Journal of University Teaching & Learning Practice, 15*(4), 1–18.

Bandaranaike, S., Willison, J. & Monash University Library. (2019, Rev. ed.). *Work Skill Development framework.* https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf

Bandaranaike, S., & Willison, J. (2010, September 29–October 1). Work skill development framework: An innovative assessment for work integrated learning. In: *Proceedings of the 2010 ACEN National Conference of the Work Integrated Learning—Responding to Challenges.* Perth, Australia.

Daniel, R., & Daniel, L. (2013). Enhancing the transition from study to work: Reflections on the value and impact of internships in the creative and performing arts. *Arts and Humanities in Higher Education, 12*(2–3), 138–153. https://doi.org/10.1177/1474022212473525

D'Angelo, B. (2012). Student learning and workplace IL: A case study. *Library Trends, 60*(3), 637–650. https://doi.org/10.1353/lib.2012.0007

Hall-Ellis, S., & Grealy, D. (2013). The Dreyfus Model of skill acquisition: A career development framework for succession planning and management in academic libraries. *College & Research Libraries, 74*(6), 587–603. https://doi.org/10.5860/crl12-349

Jackson, D., Rowbottom, D., Ferns, S., & McLaren, D. (2017). Employer understanding of Work-Integrated Learning and the challenges of engaging in work placement opportunities. *Studies in Continuing Education, 39*(1), 35–51. https://doi.org/10.1080/0158037X.2016.1228624

Junqueira, K. E., & Matoti, S. N. (2013). A comparative study of pre-service teachers' teaching efficacy beliefs before and after work-integrated learning: Part two. *Africa Education Review, 10*(sup1), S28–S46. https://doi.org/10.1080/18146627.2013.855423

Monash University. (2018). *Focus education agenda.* Monash University.

Sonnenschein, K., Barker, M., & Hibbins, R. (2019). Benefits of work-integrated learning: Perceptions held by Chinese international students enrolled in an Australian university and managers in the Chinese hotel industry. *Journal of Hospitality & Tourism Education, 31*(3), 139–148. https://doi.org/10.1080/10963758.2018.1487784

Torres, L., Bandaranaike, S., & Yates, S. (2014). *'What skills do I have? What skills will I need?' – building an employability skills profile through an online reflective learning program.* [Paper presentation]. 10th International Symposium on Cooperative and Work-Integrated Education, University West, Trollhättan, Sweden.

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Chapter 18
From Placement to Workplace: Developing Work-Ready Students

Paula Todd, Nasi Khoshsabk, Lynette Torres, and Annette Peart

Abstract At Monash University, there is a growing focus on developing work-ready students, particularly in professionally accredited degrees. In Occupational Therapy (OT), a fourth-year Honours unit, 'Transition to Practice' addresses work skills in a number of ways. An opportunity was identified by Monash University Library (MUL) to extend its long-standing relationship with OT for enabling students' research and learning skill development within the curriculum to also enhance students' skills for work readiness. We describe a library–faculty initiative to pilot the Work Skill Development (WSD) framework in a workshop designed to support students' work readiness prior to their final 9-week clinical placement. The WSD framework was effectively applied to unpack the OT Competency Standards, inform a pre- and post-work skills student self-assessment questionnaire, workshop activities and the pedagogical approach taken. Findings suggest that the application of the WSD framework assisted in determining students' skill gains from OT coursework and student preparedness for final placement. Findings also suggest this OT unit could inform further studies regarding the application of the WSD framework in other professional placement courses.

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18.1 Background and Context

Occupational therapy (OT) is a client-centred health profession concerned with promoting health and well-being through occupation, enabling people to participate in the everyday activities they might want, need, or are expected to do (World Federation of Occupational Therapists, 2012). The transition from student to clinician involves learning the professional behaviours required for safe and ethical practice, then contextualising these to the workplace (Occupational Therapy Board of Australia, 2018). Juggling competing demands, dealing with staff conflict, and a lack of role clarity are challenges faced by new graduate occupational therapists. In addition, students require a wide range of skills to enter a world of work encompassing change, complexity and a multi-layered environment (Fortune et al., 2013). Emerging work-related skills and knowledge are required to adequately prepare students for the transition into practice.

The Bachelor of Occupational Therapy (Honours) at Monash University (Australia) is an internationally recognised course comprising themed studies in knowledge on occupation and health, therapeutic interventions, and research in practice, which come together in professional practice placements. The professional placement unit 'Transition to Practice' is part of the OT (Honours) coursework and offers students a 9-week placement in a clinical setting.

Monash University Library (MUL) delivers programs within the curriculum that contribute to the development of students' research and learning skills (Smith, 2011). Specialist subject librarians and learning skills advisers work collaboratively in discipline-specific teams and partner with faculty academics to enable students' research and learning skill development (Torres & Jansen, 2016). At a time when workplace learning is seen as a transformative pedagogy and an essential part of a university student's experience (Morley, 2018), MUL saw an opportunity to respond by connecting research and learning skills to the employability skills agenda. Connecting the library's skill development programs to employability optimises students' work skill development in the placement experience and positions the library as an active contributor to graduate employability outcomes. To facilitate understanding of how research and learning skills seamlessly transfer to and can be described as employability skills, MUL adopted the Work Skill Development (WSD) framework (Bandaranaike, Willison & Monash University Library, 2019) to guide the library's teaching practice in this skill area (Torres et al., 2014).

A chance conversation between MUL staff, and the OT academic who later became involved in this initiative, discussed upcoming preparations for students undertaking the 'Transition to Practice' fourth-year unit. The WSD framework was brought into the conversation by library staff. It was explained that, the WSD framework has shown to support students prior to, during and post-placement by helping them to clarify which work skills they have as well as which work skills might require more attention (Bandaranaike, 2018). As such, we took the opportunity to offer a workshop informed by the WSD framework for students undertaking this final placement unit and encouraged the academic staff member to join the WSD workshop design team so that the workshop could be co-developed as a library-faculty collaboration. This partnership approach also ensured that the content and activities of the workshop

would connect meaningfully to the OT context and meet the learning needs of this cohort.

18.2   The Work Skill Development (WSD) Framework

The WSD framework is a conceptual model describing employability skills (see Chap. 2, Fig. 2.2). The WSD was designed to overcome Work Integrated Learning (WIL) assessment challenges, including reflecting employer objectives as well as university learning outcomes in a single measure (Bandaranaike and Willison, 2010). Bandaranaike (2018) identifies that employability frameworks to date tend to be one dimensional by listing work skill competencies (Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education & Department of Education, Employment and Work Relations [DEEWR], 2013; Australian Qualifications Framework Council, 2013). While some frameworks focus on the need for critical reflection in employability (Harvey, 2001; van Woerkom et al., 2002), the WSD framework expands on this notion by offering:

> A two-dimensional conceptual framework that incorporates both generic work skills and student autonomy to capture the connection between critical self-reflection and teaching and learning in the quest for employability (Bandaranaike, 2018, p. 3).

The WSD is supported by empirical studies and a long history of application in various WIL and clinical contexts (Bandaranaike and Willison, 2010; Bandaranaike, 2018; Bandaranaike & Kimmerly, 2014). Stated objectives of the WSD framework include the following:

- Enhance student learning outcomes from the reflective use and understanding of the WSD concepts.
- Bridge the gap between theoretical learning at universities that of practical skills required in the workplace.
- Use assessment outcomes from WSD to evaluate students' experiences and inform curriculum change and improve WIL outcomes (Bandaranaike 2010, p. 3).

The structure of the WSD framework is a single page grid made up of a vertical and horizontal axis. The vertical axis acknowledges the Work Skill Facets, which capture sets of cognitive and affective skills (Bandaranaike and Willison, 2014) as well as cultural competency skills and attributes required for workplace settings. The horizontal axis of the framework explains how work skills can be developed progressively across a learning continuum, known as the Scope for Student Autonomy. This learning continuum is sophisticated, nuanced and captures a developmental view of learning. It guides educators in how to move students from *Prescribed* learning approaches requiring close instruction from the supervisor or educator, to *Unbounded* autonomy where students can perform skills independently and unsupervised. It is important to note that taking a developmental view of learning the Scope for

Student Autonomy in the WSD framework enables and supports important principles fundamental to teaching practice (Hilsdon, 2011).

Importantly, the WSD framework can be contextualised to capture the broad range of sophisticated skills required for clinical placement including cognitive, interpersonal and emotional skills for work readiness (Bandaranaike et al., 2015). These soft skills are considered paramount for transition to clinical practice, interacting with both clients and interdisciplinary teams in clinical settings (Adamson et al., 1998; Morgan, 2017). As such, the WSD framework was considered a suitable construct to underpin a workshop designed to explicate work skills and support students in their final OT placement experience. This collaborative opportunity to design and deliver a WSD workshop with OT academics also presented the appropriate circumstances in which to evaluate the effectiveness of the WSD framework-stated objectives listed earlier.

18.3   Establishing Collaboration and Workshop Aims

Our workshop design meetings opened important and insightful conversations between library staff and academics about employability skills, pedagogy, and teaching practice. These meetings were fundamental for discussing workshop aims and how the guiding principles of the WSD could inform our design approach. This was the first time the WSD framework had been applied to the OT context, giving our collaborative pilot novel significance.

The OT academic acknowledged the important role of the Australian Occupational Therapy Competency Standards (Occupational Therapy Board of Australia, 2018) in guiding curriculum content. However, the skills within these outcomes statements needed to be first identified then rearticulated for a learning context. The academic also spoke about the challenge of determining if students are cognisant of the non-clinical work-related skills they develop through their OT coursework and whether they can articulate work skills gained from clinical placement experiences. It was also difficult to ascertain from an educator's perspective how autonomously students can perform skills as well as their awareness of how much self-reliance might be required in given situations in using these skills to the appropriate level of independence in a clinical setting.

These identified challenges provided an opportunity to explore the applicability of the WSD framework to this OT learning context. Jorre de St Jorre and Oliver (2017) stress the importance of making employability skills explicit in the curriculum as students may not actively pursue knowledge to meet employer expectations. As such, the WSD workshop aimed to provide an opportunity for students to reflect on their work skills, find a language for them, and connect the skills gained from theoretical learning in coursework to those used in clinical placement.

The stated learning aims of the workshop were:

- explore work skills and learner autonomy for placement;

- develop an appreciation of skills associated with emotional work-readiness; and
- identify skills gained from previous placements for your learning contract.

The sections that follow describe the workshop design, incorporating the fundamental pedagogical underpinnings of the WSD framework.

18.4   The WSD Framework: Providing Pedagogical Guidance

According to Bandaranaike and Willison (2017), 'the primary focus of the WSD is in teaching and learning work skills through reflective practice and identifying employability pathways' (p. 1). Therefore, the relevance of the WSD to this initiative was in the potential it provided as a tool to guide educators in making work skills explicit to students through workshop activities that stimulate reflection on learning (Torres et al., 2014). This encouragement to self-reflect on learning was, therefore, a guiding principle of the workshop. The workshop was designed using a discovery learning approach where students create connections and make their own meaning by drawing on past experiences and knowledge (Bruner, 1961). Discovery learning also emphasises active and meaningful learning opportunities to improve problem-solving abilities (Svinicki, 1998). To enable this pedagogical approach, the activities were centred on collaborative group work to encourage open conversations, with time allocated for reflection and discussion.

The workshop design team harnessed the pedagogical principles of the WSD's Scope for Student Autonomy to scaffold learning across carefully designed learning activities. As such the workshop is underpinned by theoretical constructs that include Vygotsky's theory of constructivism (1978) and learner autonomy (Boud, 1988). The activities were designed to promote developmental learning in reinforcing the importance of developing work skills in preparation for complex work environments demanded by clinical health contexts (Morgan, 2017; Toal-Sullivan, 2006).

In recognising the learning benefit of students reflecting on their work skills (Sykes & Dean, 2012), the workshop design team created a student self-assessment questionnaire adapted from an earlier instrument informed by the WSD framework (Torres et al., 2014). In this questionnaire, students reflect on work skill statements informed by the WSD's Work Skill Facets and consider how much guidance they require to perform these skills based on a scale informed by the WSD's Scope for Student Autonomy.

18.5   Creating the Work Skills Self-Assessment Questionnaire

To create the self-assessment questionnaire and make the questions in this instrument relevant to the OT context, the workshop design team undertook an interpretive analysis (Strauss & Corbin, 1998) of the OT Competency Standards in alignment with the WSD's Work Skill Facets. This provided a way to unpack the OT Competency Standards as they, at times, encapsulate more than one skill. The iterative process of interpreting these skills involved all members of the workshop design team and was undertaken at group meetings through discussion and consensus and through documents shared among the team. The pre/post-self-assessment task also incorporated skills and language from the Competency Standards. For example, 'placement', 'clinical tasks', 'workplace', and 'professional setting' were some new terms incorporated in the questionnaire. It was important to include additional survey questions to address work safety and how students respond to difficult work situations since this was an area in which the OT academic felt students needed to build confidence and understanding. The questionnaire consisted of four questions addressing work skills for each Work Skill Facet with scaled responses informed by the descriptors in the Scope for Student Autonomy of the WSD framework. The scaled descriptors ranged from *considerable guidance* to *no guidance*, representing a developmental view to learning.

In this way, the self-assessment questionnaire was informed by the WSD framework and contextualised for the OT context. This process revealed a significant benefit of the WSD as a conceptual model, as it readily adapted to a clinical work-related environment and effectively distilled and made skills in the OT Competency Standards more visible (see Table 18.1).

Ethics approval was required for administering the pre/post-self-evaluation, which was obtained from the Monash University Human Research Ethics Committee. Project number 18684 with Annette Peart as Chief Investigator (see Appendix A in this chapter for the full survey questionnaire).

We used Qualtrics (2019) to design the survey. Prior to attending the workshop, students were asked to complete the self-assessment questionnaire to reflect on the skills they perceived they had and how independently they believed they could perform these skills in clinical settings. This survey was administered again 3 weeks after the workshop, prior to commencing placement (see Appendix A in this chapter).

18.6   Facilitating the WSD Workshop

The WSD workshop was facilitated by five library staff with varying degrees of experience in delivering such workshops. In order to build the teaching team's expertise, we applied a novice to expert approach (Lave & Wenger, 1991). This approach enabled library facilitators with experience of the WSD framework to guide novice staff by involving them throughout all phases of workshop development and implementation (Jacoby & Gonzales, 1991). As such, the WSD workshop experience also

Table 18.1 Mapping the WSD facets with the Australian occupational therapy competency standards (examples)

Work skill facets	Competency standard/practice behaviour (examples)
Initiative and Goal-oriented	**Professionalism**: maintains professional competence and adapts to change in practice contexts **Knowledge and learning**: implements a specific learning and development plan when moving to a new area of practice or returning to practice
Resourceful and Informed	**Knowledge and learning**: identifies and applies best available evidence in professional practice and decision making **Knowledge and learning**: maintains knowledge of relevant resources and technologies
Learning and Reflecting	**Knowledge and learning**: reflects on practice to inform current and future reasoning and decision-making and the integration of theory and evidence into practice **Occupational therapy process and practice**: reflects on practice to inform and communicate professional reasoning and decision making
Planning and Management	**Professionalism**: manages resources, time, and workload with accountability and effectively **Occupational therapy process and practice**: uses effective collaborative, multidisciplinary, and interprofessional approaches for decision-making and planning
Critical reasoning and Problem-solving	**Professionalism**: recognises and manages conflicts of interest in all client and professional relationships **Occupational therapy process and practice:** addresses occupational performance and participation of clients, identifying the enablers and barriers to engagement
Communication and Teamwork	**Communication**: communicates openly, respectfully and effectively **Communication**: uses culturally responsive, safe and relevant communication tools and strategies

offered a valuable library staff development opportunity to build confidence in an emergent skill area.

The WSD workshop was a 3-hour session delivered to 72 OT fourth-year students (72 out of 77 enrolled students attended). We divided it into two parts, Part A and Part B. Part A explored work skills outside the expected setting of clinical practice to stimulate thinking and the concept of skill transferability. Part B of the workshop showed how these broader work skills, when contextualised, can be transferred to the OT context. The workshop activities drew on the skills categories and autonomy descriptors from the WSD framework. It is important to note here that the students were not given the WSD framework, rather the WSD framework was used as a pedagogical tool by the educators involved to design and teach the workshop. The following section outlines how each activity addressed the Skill Facets in the WSD framework.

18.7   WSD Workshop: Part A

Part A of the WSD workshop opened with an activity where students were asked as a group to 'draw their interpretation of a work-ready student' (WSD Facets: *Planning and Management, Learning and Reflecting, Communication and Teamwork*). Students returned to this activity at the end of the workshop. This activity served as an icebreaker as well as a way for facilitators to gain insight into students' perceptions of work readiness. The drawings were placed up on walls and students volunteered to explain their drawing. The next activity moved to a video set in a busy café where a waiter spoke about an issue he had encountered at work (WSD Facets: *Planning and Management, Initiative and Goal-oriented, Communication and Teamwork*). Although this was not an OT workplace scenario, the workshop was designed to take students outside the OT work context to reflect on skills transference. During the video, students wrote down the skills the waiter displayed on sticky notes. Students then matched the skills on their sticky notes to three sets of flashcards comprised of the Work Skill Facets of the WSD framework; sub-skills related to each of these facets, and cards, which prompted students with skill-related questions (WSD Facets: *Learning and Reflecting, Communication and Teamwork*). Skills for emotional work readiness were then explored through an origami paper folding activity to replicate feelings associated with doing something new for the first time (WSD Facets: *Learning and Reflecting, Resourceful and Informed, Critical Reasoning and Problem Solving*). The final activity in this section of the workshop involved students watching a second video set in a sporting context that when analysed, brought cognitive and affective skills together as well as learner autonomy.

18.8   WSD Workshop: Part B

Part B of the workshop moved to OT placement experience more specifically. Students were asked to consider OT workplace scenarios developed by the academic staff member. Students drew on their own experience to identify and articulate work skills they could identify in the scenarios as well as how much autonomy was displayed by characters in the scenarios (WSD Facets: *Communication and Teamwork, Planning and Management, Initiative and Goal-oriented, Resourceful and Informed*). The workshop ended with students referring back to their earlier work-ready student drawing and adding more thoughts, questions, and work-related terms.

18.9   Post-workshop Assessment

As part of this unit, students were required to complete an assessment task in preparation for their final placement. In the weeks after the workshop, students received an electronic copy of the WSD framework's Work Skill Facets together with skill

statements and questions from the workshop's flashcard activity and self-assessment questionnaire that were informed by the OT Competency Standards. In this way, students had these skills on hand, to refer to, for their Learning Contract assessment task. The task involved developing a Personal Learning Contract where students identified specific learning objectives for their placement and used the contract as a basis for their preliminary discussions with placement supervisors. This placed a level of importance on the WSD workshop and its aims in making work skills explicit, as students were asked to reflect on their placement experience using the six Work Skill Facets of the WSD framework. As Bandaranaike and Willison (2010) note, this provides 'greater uniformity and understanding and application of the WSD concepts amongst students and more effective feedback made possible' (p. 2).

18.9.1   Analysis of the Student Self-Assessment Questionnaire

The pre-survey questionnaire (45 responses) was administered 1 week prior to the workshop. We used the same set of questions for the post-survey questionnaire administered 3 weeks following the workshop to ascertain any changes to the students' perceived skills (19 responses). The post-survey allowed important reflective time for students to consider their learning as they approached the time for their placement.

Analysis of the students' self-perception survey was completed using SPSS (IBM, 2019). Results showed very slight but not statistically significant increases in students' perception of their ability to perform certain work skills in five of six WSD Skill Facets following the workshop. However, analysis of self-perception surveys, in general, requires caution as students tend to over-inflate their responses when completing self-assessment questionnaires, resulting in response bias (Van de Mortel, 2008; Chevalier et al., 2009). The following table presents the findings from the WSD student self-assessment questionnaire.

We took note of the small variance between the pre- and post-survey results and considered this may have resulted from students rating their skills highly for the pre-questionnaire. However, as this was a fourth-year cohort, it would be likely that students already had developed an awareness of their work skills from previous clinical placements, and from feedback from supervisors and coursework activities. The small variance could also be attributed to a well-designed curriculum, testament to coursework that successfully addresses students' work skills for placement and future work. This signals a significant benefit of the WSD as a priori framework enabling a view into students' specific work skill gains from coursework and placement experiences (Bandaranaike, 2018) and was specifically noted as challenging to ascertain by the academic involved in this collaboration.

There were two facets that indicated student self-reported improvement in the post-questionnaire, these were: *Initiative and Goal-oriented* (0.24) and *Resourceful and Informed* (0.21) (Fig. 18.1). Interestingly, the video activities in the workshop focused on the Skills Facet of *Initiative and Goal-oriented*, which prompted much
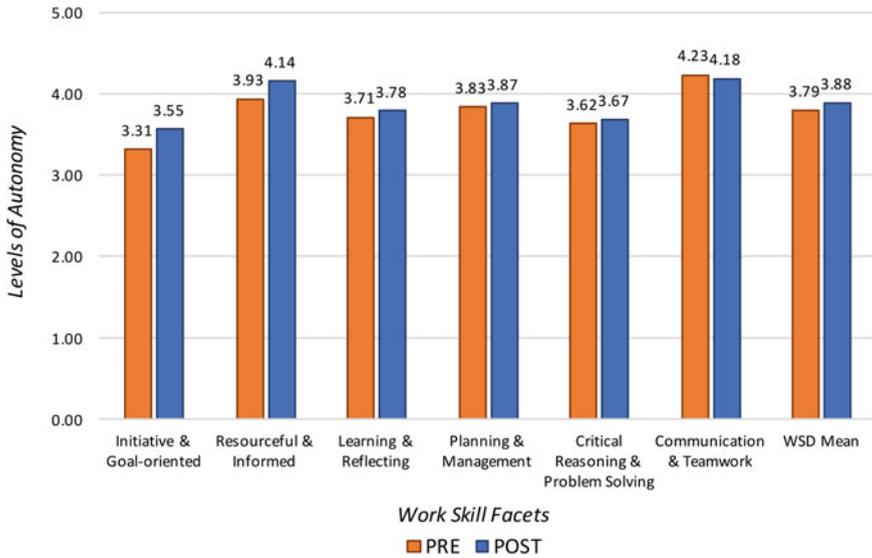
Fig. 18.1 Work skills questionnaire pre/post-self-assessment

discussion at the workshop. This indicates that these work skills may be underrepresented or underexplored when compared with other skill areas in OT coursework but became more visible throughout the workshop. The skills of *Initiative and Goal-oriented* involve the ability to establish oneself and adapt to new roles and situations, set a career path, show initiative and motivation, and explore new opportunities.

The workplace scenario activity was focused on the Skill Facet of *Resourceful and Informed*, which students may more easily identify with, perhaps from previous placements, and therefore could interpret these skills in the scenarios presented. *Resourceful and Informed* involves information-seeking skills, decision-making and using technology to stay current and up to date. Interestingly, the Skill Facet *Communication and Teamwork* was the only skill area that rated slightly higher in the pre-questionnaire, indicating that the workshop may have brought to students' attention the complexity of this skill set so that they rated themselves lower in the post-questionnaire. *Communication and Teamwork* involves a complex range of skills including ethical practice, cultural competency, communication skills, negotiation skills, and the ability to work in interdisciplinary teams.

18.9.2 Limitations

The limitations of this pilot relate to the findings from the pre/post-student self-reflection questionnaires. It is a concern that although 72 students attended the workshop, 47 contributed to the pre-questionnaire, and 19 to the post-questionnaire. Future

workshops will need to consider how and when the questionnaire is administered in order to maximise student engagement and gain a more accurate assessment of skill development. Nonetheless, the questionnaire does suggest the WSD framework is a suitable construct to inform the design of survey instruments where educators wish to gain insights to how well a curriculum is addressing work skills. Therefore, the authors propose that, despite these limitations, the approach described would be for similar professional degrees.

18.9.3   Concluding Reflections

This workshop aimed to prepare students for their final placement and future employ-ability. It aimed to progress students' understanding of work skills and their ability to articulate such skills and competencies as required for clinical practice. This was achieved through the workshop activities designed to explore and distil the term 'work skills' by bringing together and making visible a broad range of skills that transfer to clinical workplace settings. This involved bringing together disciplinary skills and competencies, skills gained from study, skills from previous placements, other work contexts and everyday life.

The workshop activities informed by the WSD framework activated the OT Competency Standards and encouraged students to engage in sophisticated thinking. Students identified the cognitive and affective work skills embedded in clinical prac-tice and through the workshop scenarios recognised the role of autonomy in building self-reliance appropriate to a clinical role. Therefore, the workshop informed by the WSD framework's autonomy descriptors allowed students to move from *Prescribed* activities that were highly guided to *Open-ended* activities where students applied their learning with scope for independence. For example, while the drawing activity was broad, workplace scenario activities were very specific to clinical practice in an OT setting. Students reflected on what they would do in the circumstances described, the skills they would be applying and how much autonomy was appropriate to solve the problem. In this way, the discovery learning approach as informed by the WSD was pivotal for guiding learning, which encouraged critical self-reflection and group discussion, both fundamental for students to become aware of themselves as learners (Boud, 1988; Willison et al., 2017). As such, the WSD gave pedagogical guidance to the workshop design and how it was taught. The WSD framework also demonstrated its flexibility and adaptability as we successfully applied it to a new learning context, signalling the sophistication of the tool.

The findings from the self-assessment questionnaire informed by the WSD frame-work assisted in demonstrating to OT academics and the library team alike, that the OT curriculum is effective in developing students' skills for clinical practice. This finding was important for addressing the concerns indicated by the OT academic during the planning phases for the workshop. What the OT Competency Standards specifically entail when and how they can be described explicitly as work skills are now clearer to educators after applying the WSD framework to guide an interpretive analysis of the OT Competency Standards.

The workshop also created a valuable professional development opportunity for the facilitators in designing future workshops. A highlight for us was in introducing the WSD framework and also in cementing the collaborative relationship between academics and library staff, and bringing together different educational perspectives and strengths to ultimately benefit the students. We strongly believe the WSD framework offers a way to guide the library–faculty collaborations in contributing to developing student readiness for placement experiences in other disciplinary areas. To this end, we concluded that the pilot WSD workshop was successful in achieving its aims.

Appendix A: Pre/Post-Self-Assessment Questionnaire Informed by the Work Skill (WSD) Development Framework. Adapted from Torres et al. 2014.

Work Skill Facets	Questions	Scale: Levels of Autonomy
Initiative and Goal-oriented	1. I am able to adapt to new situations and changing work conditions with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	2. In order to cope with stressful situations, I require…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	3. In order to plan, generate and execute a range of strategies while on placement, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	4. In order to identify new opportunities and ideas while on placement I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*

(continued)

Work Skill Facets	Questions	Scale: Levels of Autonomy
Resourceful and Informed	5. I am able to recognise when information or data is required with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	6. I am able to locate, select and use appropriate resources for specific clinical tasks with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	7. I can use a range of digital technology (computers, digital devices) with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	8. I can recognise when to apply discretion to gathering or using information to complete specific clinical tasks with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
Learning and Reflecting	9. In order to understand the desired outcomes of my role I require…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	10. In order to accept new ideas and adapt them to my work, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	11. In order to reflect on skills and knowledge and apply them to a professional setting I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	12. I am able to transfer my learning to new and unfamiliar settings with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
Planning and Management	13. In order to establish personal goals and work progressively towards achieving them, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*

(continued)

(continued)

Work Skill Facets	Questions	Scale: Levels of Autonomy
	14. In order to prioritise tasks and manage time effectively, I require…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	15. In order to make decisions with confidence, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	16. In order to reflect on my practice, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
Critical reasoning and Problem-solving	17. I am able to identify problems in the workplace clearly with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	18. I am able to analyse information from resources and draw conclusions with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	19. I am able to make reasoned judgements and informed decisions about workplace matters with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	20. In order to produce appropriate solutions based on information available, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
Communication and Teamwork	21. I am able to express ideas clearly through written and spoken communication with…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	22. In respecting cultural differences and other's point of view, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*

(continued)

Work Skill Facets	Questions	Scale: Levels of Autonomy
	23. In order to listen and negotiate successfully with others, I need…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	24. In order to work collaboratively with team members, I require…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
	25. In order to follow professional, ethical conduct in the workplace, I require…	• *Guidance from others all the time* • *Considerable guidance from others* • *Some guidance from others* • *A little guidance from others* • *No guidance from others*
Final question	Completing this self-assessment has made me more aware of the range of work skills required in professional settings	Scale of no change to awareness (0) to significant change to awareness (100)

References

Adamson, B., Hunt, A., Harris, L., & Hummel, J. (1998). Occupational Therapists' perceptions of their undergraduate preparation for the workplace. *British Journal of Occupational Therapy, 61*(4), 173–179. https://doi.org/10.1177/030802269806100411

Australian Qualifications Framework Council. (2013). Australian Qualifications Framework. https://www.aqf.edu.au/sites/aqf/files/aqf-2nd-edition-january-2013.pdf/. Accessed 17 Sep 2020.

Bandaranaike, S. (2018). From research skill development to work skill development. *Journal of University Teaching & Learning Practice, 15*(4), 1–18.

Bandaranaike, S., & Kimmerly, A. (2014, June 2–4). Building career pathways in the allied health industry: a practical framework. Paper presented at the WACE 10th international symposium on cooperative and work-integrated education. Trollhattan, Sweden.

Bandaranaike, S., & Willison, J. (2010, September 27–October 1). Work skill development framework: an innovative assessment for work integrated learning. Paper presents at the ACEN 2010: Australian collaborative education network national conference. Perth, WA, Australia.

Bandaranaike, S., & Willison, J. (2014, October 1–3). Boosting graduate employability: Bridging the cognitive and affective domains. Paper presented at the ACEN 2014: Australian collaborative education network national conference: Work integrated learning: Building capacity. Tweed Heads, NSW, Australia.

Bandaranaike, S., & Willison, J. (2017). Building learner autonomy into work- integrated learning: Challenges for the 21st century. Paper presents at the 20th WACE world conference on cooperative and work-integrated education. Chiang Mai, Thailand.

Bandaranaike, S., Willison, J., & Monash University Library. (2019, Rev. ed.). *Work Skill Development framework.* https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf.

Bandaranaike, S., Willison, J., & Torres, L. (2015, July 6–9). On becoming a professional: The role of emotional work readiness [EW]. Presented at Higher Education Research and Development Society of Australasia (HERDSA), Melbourne, Australia.

Boud, D. (Ed.). (1988). *Developing student autonomy in learning* (2nd ed.). London: Taylor and Francis.

Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review, 31*, 21–32.

Chevalier, A., Gibbons, S., Thorpe, A., Snell, M., & Hoskins, S. (2009). Students' academic self-perception. *Economics of Education Review, 28*(6), 716–727. https://doi.org/10.1016/j.econedurev.2009.06.007

Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education and Department of Education, Employment and Work Relations. (2013). *Core skills for work developmental framework [CSfW].* Canberra: Commonwealth of Australia.

Fortune, T., Ryan, S., & Adamson, L. (2013). Transition to practice in super complex environments: Are occupational therapy graduates adequately prepared? *Australian Occupational Therapy Journal, 60*(3), 217–220. https://doi.org/10.1111/1440-1630.12010

Harvey, L. (2001). Defining and measuring employability. *Quality in Higher Education, 7*(2), 97–109.

Hilsdon, J. (2011). What is Learning Development? In P. Hartley, J. Hilsdon, C. Keenan, S. Sinfield, & M. Verity (Eds.), *Learning Development in Higher Education* (pp. 13–27). Basingstoke: Palgrave Macmillan.

IBM. (2019). SPSS Version 26. https://www.ibm.com/analytics/spss-statistics-software

Jacoby, S., & Gonzales, P. (1991). The Constitution of expert-novice in scientific discourse. *Issues in Applied Linguistics, 2*(2), 149–181.

Jorre de St Jorre, T., & Oliver, B. (2017). Want students to engage? Contextualise graduate learning outcomes and assess for employability. *Higher Education Research & Development, 37*(1), 44–57. https://doi.org/10.1080/07294360.2017.1339183.

Lave, J., & Wenger, E. (1991). *Situated learning legitimate peripheral participation.* Cambridge: Cambridge University Press.

Morgan, C. J. (2017). Graduates' development of interprofessional practice capability during their early socialisation into professional roles. *Journal of Interprofessional Care, 31*(4), 438–445. https://doi.org/10.1080/13561820.2017.1295029

Morley, D. A. (2018). *Enhancing employability in higher education through work based learning.* Cham, Switzerland: Palgrave Macmillan.

Occupational Therapy Board of Australia. (2018). Australian occupational therapy competency standards. https://www.occupationaltherapyboard.gov.au/Codes-Guidelines/Competencies,aspx.

Qualtrics. (2019). Qualtrics Version XM. qualtrics.com.au.

Smith, L. (2011). Monash University Library: A new paradigm for a new age. *Australian Academic & Research Libraries, 42*(3), 246–263.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Thousand Oaks: SAGE Publications.

Svinicki, M. D. (1998). A theoretical foundation for discovery learning. *Advances in Physiology Education, 275*(6), S4. https://doi.org/10.1152/advances.1998.275.6.S4

Sykes, C., & Dean, B. (2012). A practice-based approach to student reflection in the workplace during a work-integrated learning placement. *Studies in Continuing Education., 35*(2), 179–192.

Toal-Sullivan, D. (2006). New graduates' experiences of learning to practice occupational therapy. *British Journal of Occupational Therapy, 69*(11), 513–524. https://doi.org/10.1177/030802260606901105

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. Council for Undergraduate Research (CUR) Quarterly, 37(1), 26–33. https://doi.org/10.18833/curq/37/1/9.

Torres, L., Bandaranaike, S., & Yates, S. (2014, June 2–4). 'What skills do I have? What skills will I need?'—Building an employability skills profile through an online reflective learning program. Paper presented at the 10th international symposium on cooperative and work-integrated education. University West, Trollhattan, Sweden. https://researchonline.jcu.edu.au/38450/.

Van de Mortel, T. F. (2008). Faking it: social desirability response bias in self-report research. Australian Journal of Advanced Nursing, 25(4), 40.

Van Woerkom, M., Loek, N., & Nieuwenhuis, F. M. (2002). Critical reflective working behaviour: A survey research. Journal of European Industrial Training, 26(8), 375–383.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge: Harvard University Press.

Willison, J., Sabir, F., & Thomas, J. (2017). Shifting dimensions of autonomy in students' research and employment. Higher Education Research & Development, 36(2), 430–443. https://doi.org/10.1080/07294360.2016.1178216

World Federation of Occupational Therapists. (2012). About occupational therapy. https://www.wfot.org/about/about-occupational-therapy.

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Part VI
Conclusion

Chapter 19
Transforming Practice for Educational Impact

Lynette Torres, Fiona Salisbury, Barbara Yazbeck, Sharon Karasmanis, Janice Pinder, and Caroline Ondracek

Abstract It cannot be disputed that the difficulty facing academic libraries in connecting Information Literacy (IL) theory and practice in the curriculum prevails as a long-standing concern.

19.1 Chapter Overview

It cannot be disputed that the difficulty facing academic libraries in connecting Information Literacy (IL) theory and practice in the curriculum prevails as a long-standing concern (Schachter, 2020; Weiner, 2012). This strongly suggests that a lack of well-articulated theoretical underpinnings for library IL practice have limited the potential for librarians to effectively facilitate the changes required to address this problem. Despite discussions in the literature exploring ways to mitigate this challenge, gaps in knowledge and understanding prevail and the problem persists as a global concern in the library sector.

This book has presented a selection of practice-based examples from Monash and La Trobe University Libraries which demonstrate how we have overcome this recognised gap and are successfully connecting the library to the curriculum. The different pedagogical models we have adopted have evoked a more explicit understanding and application of educational theory in practice to effectively guide collaborative teaching approaches for embedding IL and research skills in disciplinary content. Our conceptual models have also provided the structure and pedagogical guidance required to respond to contemporary skill areas in higher education which has kept the library relevant, as a significant and valued contributor to student learning outcomes.

In this chapter, we survey the practice-based examples and make observations in response to the following guiding questions:

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1. What are the advantages of underpinning library teaching practice with pedagogical models?
2. What are the challenges of adopting pedagogical models to underpin library teaching practice?
3. What does this mean for student success and the educational role of the library?

This final chapter considers the practice examples from a different perspective by taking a slice across the themes in this book to explore and reflect on the questions above. To answer these questions, we applied interpretive analysis techniques informed by qualitative methods to survey the chapters (Strauss & Corbin, 1998). Repeated ideas across chapters were coded by the editorial team using NVivo 11 qualitative data analysis software. This involved grouping ideas into high-level concepts, and through an iterative process of review, the ideas and concepts identified were re-coded into related sub-categories.

The findings confirmed and extended our observations and insights. We uncover what library–faculty teaching collaborations underpinned by pedagogical models look like and the critical factors for their success. We consider what enables students' skill development in the curriculum and what this means for the teaching identity of librarians. We also consider what this means for the library's strategic educational role and the effectiveness of how we contribute to student success. We reflect on the ideas and insights revealed by the authors of this book, what lies in common and what differs between our library's experience and importantly, the surprises, rewards and conditions required for libraries to navigate more purposefully into the educational space.

As outlined in Chaps. 2 and 3, our libraries have adopted two distinct models. What we have in common is that both libraries have been firmly focused on advancing the development of research and information skills in the curriculum. Furthermore, both libraries have been advocates of embedding these skills as a shared responsibility. Our combined practice examples demonstrate that the library has relevant professional skills and the expertise critical to successfully connect the library to the curriculum as a collaborative endeavour. The question of how we commenced venturing on this path is often raised in conversation with other libraries. For this reason, we describe each library's strategy for adopting and implementing pedagogical models. For practitioners who are ready to effect change in their library or institution, our intention is, that by sharing our experience and how we started, you will gain the confidence and motivation to begin, at the individual, team or at the organisational level.

19.2   Advantages of Adopting Pedagogical Models

Of overarching significance in applying a theoretical approach to the library's teaching practice is the benefit the models provide for enabling a shared conversation for students' skills development. The models provide a starting point for using

a language in common amongst educators. The practice-based examples demonstrate that a mutually understood language is the strongest, most effective ingredient to leverage the right conditions required for establishing effective library–faculty teaching partnerships and meaningful involvement in the curriculum. Furthermore, collaboration guided by pedagogy brings learning opportunities for library staff to build teaching capabilities that in turn contribute to the collective developmental growth of the library's teaching practice. In this chapter, we argue that the guidance given to library staff through theoretically informed models has provided the ability to converse as educators, with educators, and transition from instructional one-shot sessions that dominate the literature to achieve what library education agendas strive to achieve—an impactful, embedded, visible contribution to student learning. Therefore, the practice-based examples applying the respective pedagogical models tell us that the learnings gained are as much about teaching practice, as they are about student learning. The following sections draw out what we have learned and discovered from applying the models. We consider the interrelationship of these findings, with a particular focus on what we need to do as library professionals in terms of understanding and developing practices to successfully connect the library to the curriculum.

19.2.1 Enabling Conversation for Collaborative Partnerships

The most frequently noted advantage identified by the authors from applying the Models of Engaged Learning and Teaching (MELT; Willison, 2017) and the Library Learning and Teaching Partnership Framework (LLTP Framework; La Trobe University Library, 2019) is how the frameworks have opened library–faculty conversations about students' skill development, leading to collaboration with academic colleagues. Having a language in common through which to discuss students' skill development meaningfully has been integral for overcoming barriers and perceptions of how library staff can contribute to student learning. The models have provided the basis for common understanding and are part of what needs to transpire for a trusted teaching relationship to be established between library staff and academic staff. As the practice-based examples highlight, building trusted relationships with academic colleagues is critical for creating the common ground required to forge teaching partnerships. This suggests that the pedagogical models offer a 'missing link' and a way to address the gap in the literature, as 'trust' enabled through shared conversations using a mutually understood language is the single most essential ingredient for cementing the partnership. This fundamental and beneficial outcome of applying pedagogical models results in a more impactful and collaborative library teaching practice.

Skill development expertise brought to the collaboration by the library to interdisciplinary degrees illustrates this convincingly. In the Monash environment, Castillo and Ho (see Chap. 5) describe the challenges of a new multi-disciplinary context taught by a range of discipline experts with different bodies of knowledge and

pedagogical perspectives. The library's workshops introducing the Research Skill Development (RSD) framework assisted in breaking down disciplinary barriers and creating shared understandings of what research skills look like for this interdisciplinary team of educators. From the viewpoint of the academic colleague in this partnership, the RSD framework was invaluable for enabling collaboration between the library and discipline experts (Dr. S. Ho, personal communication, 21 September 2020).

> The library team provided us with a common language to unearth, articulate and bridge disciplinary domains (read silos). The language derived from the RSD framework enabled a way to approach our conversations and collaborate for education design. This became our common language for the degree. If I had to put it simply, library staff, through the RSD framework removed our disciplinary 'blinkers' and constraints, thereby enabling true educational collaboration to occur.

Similarly, Kananatu, Santra and Yahya (see Chap. 7) also note practical beneficial outcomes from collaborative conversation guided by the RSD framework:

> The library's expertise, not only with the framework, but also with the development of research skills per se, facilitated the redesign of the assessment, the construction of the marking rubric and started the discussion on the learning outcomes of the unit (see Chap. 7 by Kananatu, Santra and Yahya.).

The benefit of enabling teaching collaboration through conversation is supported empirically by Willison (2020) in relation to the MELT, noting that

> To facilitate teacher engagement, experience and emerging evidence have demonstrated that the single most helpful factor for the successful adaptation and use of MELT is conversation. Through mature, inter-professional conversation, the MELT is defrosted and animated with the warmth of human interaction. These conversations may take place between colleagues, classroom teachers and coordinating academics, tutors at university, school and home, principals, librarians, learning advisors, and parents. Engagement, based around MELT, provides common ground and fosters discussions, collegial debate, disagreement, and ways to proceed (Willison 2020, p. 62).

Willison's promotion of inter-professional conversation to animate the MELT as a common theoretical understanding is transferable and makes sense where theory informs collaborative IL practice. In the context of the La Trobe Model and LLTP Framework, Spain (see Chap. 4) stresses that a common language and pedagogical approach has built trust amongst educators. Spain emphasises that trust needs to be at the core of the partnership to establish common goals and for conceptualising a shared responsibility for student learning. This is reiterated by O'Hanlon and Karasmanis (see Chap. 11) whose successful collaboration in a history subject relied on the trust developed between library, teaching and educational design staff. Leveraging the modes of engagement outlined in the LLTP Framework, the authors note that collaboration was the key to ensuring that students, learning, content and teachers were connected in a way that matched a blended learning environment. Discussion of modes of learning was instrumental in establishing understandings among educators from different areas of the university. The importance of conversation based on shared theoretical understanding cannot be underestimated. Conversation leads

to collaboration and collaboration relies on conversation. As noted by Spain and Mackay:

> The key to the success of the approach to teaching legal research skills in 'Legal Institutions and Methods' is our collaboration. Our regular conversations are an illustration of how librarians and academics can work together to provide constructively aligned legal research skills into a subject (see Chap. 10 by Spain and Mackay.)

Teaching partnerships that have stood the test of time also describe the benefits of having language in common to guide the partnership (see Chap. 4 by Spain; Chap. 6 by Findlay and O'Dwyer; Chap. 7 by Kananatu, Santra and Yahya; Chap. 9 by Karasmanis and Murphy; Chap. 11 by O'Hanlon and Karasmanis; Chap. 14 by Gleeson, Junor and Mayson; Chap. 16 by Ripoli, Carey, Chong and Ondracek). All of these partnerships have kept the pedagogical models front and centre in the teaching collaboration for many years. The authors clearly value these tools because they strengthen the partnerships through collaborative conversations that have enabled the unit/subject to evolve and improve over time. Importantly, this perspective is championed by our academic colleagues as described below by Dr S. Mayson, a collaborator in the Gleeson, Junor and Mayson practice example (see Chap. 14).

> This long-standing collaboration is founded on a mutual professional respect and a shared understanding of pedagogy and the research and teaching skills required to scaffold student learning. I always look forward to the beginning of each semester when I get together with library colleagues to decide what and how we are going to do with the students to set them up for the learning and assessment in the coming semester (personal communication, 10 September 2020).

In practice-based examples where collaboration has endured for more than a decade within a course (see Chap. 9 by Karasmanis and Murphy), not surprisingly there have been academic and library staff changes over time. This changing of the guard demonstrates that not only does shared understanding of pedagogy underpin sustained collaboration, but it is also a critical element of long-term continuous improvement and iterative development.

> Whilst information literacy has been embedded into the Health Sciences curriculum since 2009, it is important to ensure that our ongoing curriculum conversations remain current and relevant in the Health Sciences environment. Every effort ensures that learning activities, whether tutorial classes, online modules or quizzes remain engaging, current and relevant to students (see Chap. 9 by Karasmanis and Murphy.)

However, continually refreshing shared perspectives is equally important in shorter-term collaborations. Findlay and O'Dwyer (see Chap. 6) found that being able to articulate a shared intent using the LLTP Framework not only provided a 'creative opportunity for collaboration', but also it ultimately led to characterising their collaboration as a learning community.

> The process of collaboration between academics, educational designers, learning advisors, and librarians generated an inclusive learning community for these staff. As resources were developed, we became increasingly aware that we were exemplifying precisely the type of inclusive learning community that we wanted our students to experience (see Chap. 6 by Findlay and O'Dwyer.).

Gleeson, Junor and Mayson (see Chap. 14) from Monash University Library (MUL) emphasise that the longevity of their teaching partnership applying the RSD framework has been instrumental for articulating the educational expertise of library staff in this partnership. The authors stress the benefits the RSD framework has brought for establishing a language in common to build trust, understanding and a consistent approach in their shared teaching practice in the following insight:

> The RSD framework provided us, as a diverse teaching team, with a common pedagogical perspective and mutually understood language. Anchoring our teaching approach with the RSD framework supported a way to visualise, unpack and articulate the research process to in turn communicate this skill set to students using consistent terminology (see Chap. 14 by Gleeson, Junor and Mayson.).

The outcomes we have described clearly echo the principles of collaborative leadership in educational settings (Coleman, 2012; Seashore Louis, 2007) as the practice-based examples demonstrate characteristics and behaviours associated with the domains of collaborative working where mutual trust is at the centre of the partnership. Coleman stresses the importance of trust as an antecedent for improving performance, increasing competence and confidence, reducing fear of error, encouraging growth in learning, overcoming suspicion and supporting communication. Trust initiates and facilitates deeper and more effective collaborations than would otherwise be possible as within the process of mobilising collaboration are important processes that create high functioning partnerships to affect systemic organisational change (p. 85). The practice-based examples in this book demonstrate that trust was established through the ability to converse using a language in common for student skill development as such mutual goals were established in the collaboration. This outcome increases the significance and relevance of pedagogical models for facilitating trust in library–faculty teaching partnerships and systemic change.

19.2.2 Mobilising Diverse Skills Agendas

Libraries globally are directing their attention to exploring how information research skills connect and transfer to new and emerging contemporary skills such as digital literacy (Hallam et al., 2018; Johnston, 2020; McLeod & Torres, 2020; O'Sullivan et al., 2019; Salisbury et al., 2016) and skills for work-readiness (Torres et al., 2014). The ability of the models we describe to adapt to this dynamic educational landscape shows that they can effectively guide pedagogy for diverse skill foci in higher education, particularly in cases when such tools to guide educators are lacking. For example, one of the high-level components of the LLTP Framework is digital literacies and this gives librarians scope to collaborate with teaching and learning staff to embed a full range of diverse skills related to digital and information literacies drawing on either the ILM or the La Trobe Digital Literacies Framework (see Chap. 6 by Findlay and O'Dwyer). The MELT comprises a suite of frameworks that focus on emergent skill areas. The Digital Skill Development (DSD) framework, for example

(Torres et al., 2018), was created at Monash University as a collaboration between academics and library staff. This collaboration opened the opportunity to pilot the DSD in a Pathways Education unit, which is the practice-based example presented in this book (see Chap. 15 by Pilz, McLeod and Yazbeck). While the benefits of using pedagogical tools are demonstrated by ongoing teaching partnerships, developing a pedagogical framework itself as a collaborative endeavour between library and academic colleagues has resulted in a shared ownership of the artefact and the ideas it espouses. Creating a pedagogical response for digital skills following the same structure and theoretical underpinnings as the MELT also makes sense. Library staff and academics already acquainted with the MELT have a familiar frame of reference to more readily adopt and apply the tool. A pedagogical response to digital skills keeps the library agile and responsive to emergent skill agendas in higher education that keep the library insight.

MUL has also envisaged the potential of the Work Skill Development (WSD) framework (Bandaranaike & Willison, 2009, 2018; Revised by Monash University Library 2019) a way to connect the library to the employability skills agenda (see Chap. 18 Todd, Khoshsabk, Torres and Peart). With permission from the authors of the WSD framework, MUL affirmed its interest by contributing to the revised version of this framework to also incorporate cultural sensitivity and digital skills (Bandaranaike, 2018). The WSD framework has enabled MUL to contribute to Work Integrated Learning programmes with several faculties over the years. Applications of the WSD framework shared in this volume include a library-hosted internship programme (see Chap. 17 by Dewi, Kim and Jackson) and a WSD workshop for students embarking on their final placement in a fourth-year Occupational Therapy unit (see Chap. 18 by Todd, Khoshsabk, Torres and Peart).

In reference to the employability skills agenda, both the WSD framework and LLTP Framework have assisted in interpreting which skills were embedded in professional standards of practice in Health Sciences (see Chap. 16 by Ripoli, Carey, Chong and Ondracek; Chap. 18 by Todd, Khoshsabk, Torres and Peart). Ripoli et al. note:

> Learning outcomes in Advanced Research Library Skills (ARLS) were taken from the Information Literacy Matrix (ILM) in the Library Learning and Teaching Partnership Framework (La Trobe University Library, 2019). The ARLS program structured students' activities around EBP key concepts…The value of adding the ARLS program and its alignment with the internship research strategy was clear to us and it has been a success. The combination of embedding the EBP skill development and the research projects themselves has allowed students to practise skills. Furthermore, this combination has enhanced students' professional and personal development and their potential employability (see Chap. 16 by Ripoli, Carey, Chong and Ondracek.).

In the disciplinary context of Law, the LLTP Framework enhanced the ability to draw links between IL and research skills with skills for work-ready law professionals (see Chap. 10 by Spain and Mackay). In a similar vein at MUL, Brabon, Tucker, Pulungan and Lang (see Chap. 8) found the RSD framework helped to create a bridge of understanding between the skills required in a range of professional contexts. As such, these frameworks were instrumental in drawing the connection between the skills students are learning in their coursework and the skills required in professional

workplace environments. This benefit is significant as making the skills students engage with in coursework explicit, relevant and transferable to the workplace creates the mechanism for our libraries to contribute as educators to graduate learning and employability outcomes.

19.2.3 Adaptability to a Range of Learning Contexts

A frequently noted advantage is the versatility the frameworks provide in adapting to context, cohort and a range of disciplinary areas. This is evident from the breadth of disciplines library staff have been able to apply the models. For example, the RSD framework has demonstrated its flexibility to adapt to and enhance understandings of what research skills entail for Art, Architecture and Design (see Chap. 13 by Manuell) where an adapted version of the RSD framework supports skill development through visual reinforcement. Castillo and Ho (see Chap. 5) also show how adaptable the RSD framework has been for a Masters interdisciplinary degree by guiding educators to identify 'boundary-spanning' skills required in interdisciplinary learning and connect these skills to the research process. Kananatu, Santra and Yahya (see Chap. 7) also found the RSD framework useful for aligning legal methods of analysis and criteria for legal essay writing for an interdisciplinary unit. The LLTP Framework has effectively guided librarians to support students' skill development in Law (see Chap. 10 by Spain and Mackay) as it has for the Health Sciences (see Chap. 16 by Ripoli, Carey, Chong and Ondracek). The frameworks have been flexible to meet the needs of a range of year levels and have equally supported undergraduate units (see Chap. 8 by Brabon, Tucker, Pulungan and Lang; Chap. 9 by Karasmanis and Murphy; Chap. 11 by O'Hanlon and Karasmanis; Chap. 13 by Manuell; Chap. 14 by Gleeson, Junor and Mayson) as Masters degrees (see Chap. 4 by Spain; Chap. 5 by Castillo and Ho; Chap. 7 by Kananatu, Santra and Yahya; Chap. 12 by Turner, Young, Freeman and Zahora). The models have supported transition to university programmes (see Chap. 6 by Findlay and O'Dwyer) digital skills for Pathway students (see Chap. 15 by Pilz, McLeod and Yazbeck) and for final year workplace experiences (see Chap. 16 Ripoli, Carey, Chong and Ondracek; Chap. 17 by Dewi, Kim and Jackson; Chap. 18 by Todd, Khoshsabk, Torres and Peart). Furthermore, the adaptability of the RSD framework to transcend cultural boundaries in Business Law in an international higher education context is described by Kananatu, Santra and Yahya (see Chap. 7). Therefore, the examples evidence the ability of the pedagogical models to adapt to content knowledge and encourage sophisticated thinking skills in both traditional and interdisciplinary contexts.

19.2.4 Embedding Skills Explicitly in the Curriculum

Embedding IL and research skills in disciplines has been a strategic aim of libraries for many years (Kranich et al., 2020). Clarifying what IL and research skills encompass and how to embed them in curriculum using models underpinned by educational theory has been transformative for our libraries. However, in order to embed skills in a disciplinary context, our libraries needed to establish clarity as to what 'embedding' actually means as this term, in our experience, can be misunderstood. Embedded skill development is achieved when the skills the library is contributing to student learning are 'framed in curriculum objectives, learning outcomes and assessment criteria' (Bundy, 2004, p. 7). This can be difficult to achieve without the guidance of a pedagogical model for skills development. Karasmanis and Murphy (see Chap. 9) state that the LTUL Model has provided a way for the library to contribute directly to intended learning outcomes in a Health Sciences unit. Brabon, Tucker, Pulungan and Lang (see Chap. 8) and Kananatu, Santra and Yahya (see Chap. 7) describe how they were able to embed research skills using the RSD framework in both Law and Business Law units, respectively. These authors also describe how they created RSD informed assessment rubrics as a product of their collaboration, demonstrating that the skills library staff teach are recognised and valued by Law educators and students alike.

Developing students' research skills explicitly and incrementally in learning activities using the RSD framework is also described by Gleeson, Junor and Mayson (see Chap. 14), Castillo and Ho (Chap. 5) and by Brabon, Tucker, Pulungan and Lang (Chap. 8). Authors applying the LLTP Framework, frequently commented on how the frameworks provided a way to align and scaffold skills coherently as part of the curriculum design (see Chap. 4 by Spain; Chap. 10 by Spain and Mackay; Chap. 11 by O'Hanlon and Karasmanis). For example, as described by Spain and Mackay:

> Using the LLTP Framework, which enables such collaboration between librarians and academics, curriculum design took place through a series of lengthy conversations to develop the approach and learning outcomes that each of us, in our different roles, saw as valuable for first-year students. Constructive alignment was achieved by designing learning activities that aligned with the research ILO and assessment, in-class instruction was in the context of the class topics, and the quizzes followed on from this instruction, providing hands-on practice and reinforcement of skills. These conversations were premised on mutual recognition of the importance of teaching these skills and each other's valuable contribution to student learning. (see Chap. 10 by Spain and Mackay.)

O'Hanlon and Karasmanis clearly state the benefits of the LLTP Framework as a holistic way to guide teaching, embed and scaffold skills in a blended learning History unit.

> The LLTP Framework was instrumental in steering educational outcomes in this subject, particularly learner engagement (critical for students of history), development of constructively aligned learning resources, student support and skill development. (see Chap. 11 by O'Hanlon and Karasmanis.)

Karasmanis and Murphy (see Chap. 9) describe how the LLTP Framework was instrumental for informing skill development in curriculum design and connecting

research skills to Evidence-Based Practice (EBP) in the Health Sciences. In a similar way, Turner, Young, Freeman and Zahora (see Chap. 12) describe how the RSD framework was applied to design a series of research skill development workshops for Nursing students which also incorporated exploring EBP. Therefore, both practice examples underscore and demonstrate the effectiveness of a pedagogical model and framework for aligning research and information skills with discipline-specific methodology. These practice-based examples share the same intention; to introduce students to EBP in professional health care practice to understand the role of research evidence and the skills involved in this practice.

The pedagogical models have also enabled the library to contribute to learning outcomes and rubric design that explicitly articulate the research skills students were developing as part of their learning (see Chap. 14 by Gleeson, Junor and Mayson; Chap. 8 by Brabon, Tucker, Pulungan and Lang; Chap. 5 by Castillo and Ho). The academic colleague contributing to Kananatu, Santra and Yahya (see Chap. 7) acknowledges the expertise of library colleagues in this regard.

> The expertise of library staff facilitated the redesign of the assessment, the construction of the marking rubric and started the discussion on the learning outcomes of the unit. (Thaatchaayini Kananatu, Senior Lecturer, Coordinator of Business Law & Taxation)

Brabon, Tucker, Pulungan and Lang (see Chap. 8) were able to make research skills explicit in Threshold Learning Outcomes for Law using the RSD framework and Spain (see Chap. 4) was able to achieve the same outcome also in a Law unit using the LLTP Framework. These examples from both of our libraries demonstrate the effectiveness of these conceptual pedagogical models for making IL and research skills explicit in a range of curricula to facilitate how they are understood, conceived and validated by educators as fundamental for learning, further legitimising the library's role in their development.

19.2.5 Pedagogically Informed Learning Objects and Activities

Both pedagogical models have clearly supported a way for library staff to create theoretically informed learning activities to support students' understanding of the skills they are developing. For example, Manuell (see Chap. 13) sought to overcome the problem of students being unable to draw links between skills and processes involved with researching as skills akin to those used in the creation of artwork, developed learning objects appropriate to the visual realm that were informed by the RSD framework. Gleeson, Junor and Mayson (see Chap. 14) also created learning objects and activities using research skill terminology that were informed by the RSD framework to enhance students' ability to engage critically with literature in the field. The authors describe that this approach overcame a challenge they faced with this particular cohort.

One of the challenges with the cohort was to build their confidence with the skills required for research so that they could engage more insightfully and critically with Management literature as they progressed through the semester. (see Chap. 14 by Gleeson, Junor and Mayson.)

Kananatu, Santra and Yahya (see Chap. 7) identify a disconnect with the theoretical frameworks available to guide educators for the Masters of Business Law, as students undertaking this programme of study area are not Law students. Discipline frameworks designed for legal reasoning in law make sense of the law but do not encourage students to develop the research-mindedness required for Business Law. The RSD framework was applied to this unit to design learning activities to make research skills explicit to students as a way to overcome this identified pedagogical gap. The authors describe the purpose of the RSD in this unit was to

…. focus on integrating research skill development into assignments and marking rubric criteria, with the intention of constructing assignment tasks and marking rubrics that align to the RSD framework. (see Chap. 7 by Kananatu, Santra and Yahya.)

At this point, it is important to note that the MELT frameworks per se are not presented to the students in their undergraduate years. The way undergraduate cohorts engage with the MELT is through products that are created and informed by the MELT frameworks such as learning objects, tasks informed by the MELT and their corresponding rubrics and the design of the class itself. Students in their postgraduate years however benefit from referring to the autonomy descriptors in these frameworks to reflect on and chart their own learning journey in relation to their skill development.

The MELT frameworks were also useful for informing the design student skill development questionnaires and to gain feedback on learnings gained through session evaluation surveys. The questionnaires and surveys provided a way to marry the intended learning outcomes to what students perceived they gained from the library classes. The instruments explicitly included research skill terminology (Turner et al., Pilz et al., Todd et al.). Authors found that the frameworks were not only useful for designing these instruments, but that the MELT frameworks also offered an important interpretive lens through which to analyse the student questionnaires. In this way the effectiveness of the sessions was determined as well as, how students understood or were aware of the skills they were developing as a result of the sessions. The questionnaire findings provided some surprising insights. The WSD student questionnaire (Torres, Bandaranaike & Yates, 2014) adapted by Todd, Khoshsabk, Torres and Peart, for example, was designed to align and draw out work skills in the Occupational Therapy Professional Standards of Practice with the WSD. Findings showed that the WSD framework was useful for evidencing students' skill strengths gained by fourth year, and the effectiveness of the curriculum in achieving this for a professionally accredited degree.

In another example, Turner, Young, Freeman and Zahora (see Chap. 12) surveyed students to determine the effectiveness of their three-day skill development programme for Nursing Masters students. Findings indicated that students still lacked an understanding of certain critical skills for this practitioner context such

as analysis and synthesis. Turner et al. note a benefit of applying the RSD as an analytical lens:

> Using the RSD framework as an analytical lens to evaluate student reflections helped us identify knowledge gaps and approaches we could address in future iterations of the program. (see Chap. 12 by Turner, Young, Freeman and Zahora.)

A great benefit of conceptual pedagogical models is their ability to provide a lens through which to identify skills in knowledge content. This process facilitates the ability to create learning objects and activities that bring the skills that students need to develop to engage with learning to the fore. The LLTP Framework's focus on blended and online learning supports library creation, adaption and reuse of online learning objects which fits into the overall picture of embedding information and digital literacies into the curriculum. Online learning objects (see Chap. 6 by Findlay and O'Dwyer; Chap. 9 by Karasmanis and Murphy; Chap. 10 by Spain and Mackay; Chap. 11 by O'Hanlon and Karasmanis; Chap. 16 by Ripoli, Carey, Chong and Ondracek) are embedded learning activities and used as a springboard to discipline research activities and assessment tasks. Online reusable learning objects are part of creating 'a scalable learning landscape' (Kammerlocher et al., 2011, p. 392). and are an important vehicle for reaching all students (see Chap. 9 by Karasmanis and Murphy; Chap. 16 by Ripoli Carey, Chong and Ondracek). For students online learning objects offer self-paced learning anywhere and anytime. For academics and librarians, online learning objects can be adapted and reused across a range of discipline contexts and provide a sustainable alternative to face-to-face teaching,

One of the key advantages of the learning objects described in the LTUL practice-based examples is that they give academics flexibility and control in how they are used in Level 2 collaborations (see Chap. 3 by Salisbury and Ondracek) and in Level 1 collaborations they are used in a way that is both relevant to a discipline and subject and relevant to what academics want students to learn (see Chap. 6 by Findlay and O'Dwyer; Chap. 9 by Karasmanis and Murphy; Chap. 16 by Ripoli Carey, Chong and Ondracek). Increasingly, use and reuse of learning objects is part of a shift to open educational practice, and this is not only encouraged and promoted but also the focus of collaboration with academics (see Chap. 9 by Karasmanis and Murphy).

19.2.6 Improving Teaching Practice

With the advent of the ANZIL Standards (ANZIIL 2004), the teaching role of the librarian gained prominence. Although noted by Peacock as a 'subtle shift in emphasis from that of librarians who teach, to librarians as teachers' or 'learning facilitators', what became evident was that a 'deeper understanding of the multiple facets of education and training' was required by librarians (Peacock, 2001, p. 30). It is interesting that to date, much of the library literature presents examples of IL instruction describing varying degrees of integration in the curriculum. However, very little of it has discussed how to prepare librarian's pedagogical knowledge

and teaching skills to become active contributors to curricular design (Moleson and Wang 2014; Osborn, 2017; Namaganda, 2020). Research undertaken by Galoozis (2019) identifies that one-shot instructional sessions do not promote the right environment to motivate librarians to move from instructional teaching practices. In such sessions, librarians generally teach on their own, consequently, opportunities for constructive feedback from peers to facilitate enhanced teaching practices are reduced. Galoozis (2019) also notes another concerning barrier to the development of librarians as teachers in that working in teaching contexts which separate librarians from the results of their labour can also reduce their motivation to adopt new teaching practices.

This places a new level of emphasis on the role of pedagogical models for building staff capabilities and skills to improve the teaching skills of librarians and the importance of formal opportunities to reflect on and share examples of practice. As evidenced in the chapters of this book, underpinning teaching practice with pedagogical models has provided the structure for supporting collaborative teaching partnerships. Through iterative engagement and application of the pedagogical models coupled with formal opportunities to reflect and learn in practice, the confidence and motivation for library staff to adopt 'new' teaching practices is clearly evident in our libraries. There was a strong consensus amongst authors that the pedagogical models provided the means to move in step with current pedagogies and new teaching methodologies to improve teaching practice. For example, Spain and Mackay (see Chap. 10) note the benefits that constructive alignment brought to their teaching. O'Hanlon and Karasmanis (see Chap. 11) are also aware of this growth by reflecting:

> I made gradual changes each year in order to make my teaching become more student-centred and interactive. I became more of a facilitator than a teacher, encouraging students to ask questions and think critically about the subject matter. (see Chap. 11 by O'Hanlon and Karasmanis.)

Reflections from the authors on learnings gained from using pedagogical frameworks offer some surprising outcomes, some of which may not be so readily visible or discovered without the lens provided by these pedagogical tools. This is noted by the academic colleague contributing to Pilz, McLeod and Yazbeck (see Chap. 15).

> Working more closely with the library has, through the MELT frameworks, given me a vocabulary that helps clarify my own understanding of skill development and changed the way I deliver my units. I am much more aware of my assumptions about student skills when designing my units and assessment tasks.
>
> (Dr Amber McLeod, Director Pathway Programs, Faculty of Education, Monash University.)

The guidance provided by pedagogy for theorising and reflection on praxis is also strongly evident in the chapter by O'Hanlon and Karasmanis (see Chap. 11), the authors noting the importance of theorising their teaching, to become more creative, reflective and critical professionals.

> …. motivating students and developing their research skills has enabled us as educators to enhance our own skills in teaching and facilitation through collaboration and continual reflection. (see Chap. 11 by O'Hanlon and Karasmanis.)

O'Hanlon and Karasmanis continue their reflection by acknowledging that

> ... I have become more confident in my teaching and feel I have become better at encouraging students to develop skills and think critically and ethically, and to let their questions drive the direction of the class more. (see Chap. 11 by O'Hanlon and Karasmanis.)

Similarly, Dewi, Kim and Jackson (see Chap. 17) in their application of the WSD set autonomy benchmarks for intern students in relation to work skills for a Library Internship Programme. In doing so Host Supervisors observed that autonomy was a more nuanced and fluid phenomenon than a static 'target'. As such, the authors gained insights into students' skill capabilities and levels of self-reliance to inform educator and workplace expectations for the future design of internship programmes.

> The WSD framework was instrumental in assisting host supervisors to identify a mismatch in how much perceived guidance the interns required from supervisors on commencement of the program, as in fact, students had the ability to perform with greater self-reliance in relation to certain skills than initially expected. (see Chap. 17 by Dewi, Kim and Jackson.)

Turner, Young, Freeman and Zahora (see Chap. 12), on applying the RSD framework, became more aware of themselves as teachers, with insights gained into the relationship between teaching techniques and how students become more autonomous in their learning. By reflecting on their teaching approach guided by the RSD framework, Turner et al. concluded that if they used research-related terms more explicitly in their teaching, that student might better understand what these skills involve, including their relevance to a researcher and nursing practitioner context. As such, Turner et al. show growth in their developmental understanding of teaching practice in particular respect to learner autonomy, as they identify that in order for students to be able to transfer their skills with greater independence to other learning contexts, students need to be aware of the skill they are developing in the first instance.

> …enhancing students' conceptualisation of what the skills of analysis and synthesis, evaluation and reflection entail, might be improved by using research-related terminology more explicitly in our teaching. This is something we will look to address in future programs. (see Chap. 12 by Turner, Young, Freeman and Zahora.)

Although the ability to make research skills and processes explicit is a recognised benefit of applying the MELT (Torres, 2018; Torres & Jansen, 2016; Willison, 2018), the authors had to 'see' and experience this in practice for their own developmental learning as educators to take place. Gleeson, Junor and Mayson (see Chap. 14) also reflect on their learnings as educators, noting that in applying the RSD framework to their teaching collaboration and for designing learning objects and activities, it became apparent to them that they were not only guiding students to become aware of the skills required to engage with knowledge, but in doing so they were helping students 'learn to learn'.

We recognise that long-term partnerships to connect the library to the curriculum such as these are not always possible in higher education, however the contributing authors to this book have consistently stressed the value of underpinning collaboration with pedagogical frameworks. The advantages provide colleagues with an

opportunity to learn, reflect, adjust and improve on practice together. It is therefore important to note that the practice-based examples in this book demonstrate a developing growth in knowledge and understanding in applying the models. As opportunities to engage with and apply the models are presented and engagement is sustained over time, depth of knowledge and understanding increases. In this way, the examples demonstrate variances in depth and breadth of experience, knowledge and understandings of the models and associated frameworks amongst authors. As such, some chapters show the early beginnings of embarking on a learning journey and what the frameworks are revealing to the authors about teaching practice, other chapters display knowledge gained from their long-term application resulting in a more nuanced and sophisticated understanding of these models. This is important to emphasise as in presenting practice examples at varying stages of developmental understanding reflects healthy ongoing organisational growth.

The importance of these insights for library programmes is significant, and shows that the frameworks are sophisticated tools that require repeated use and application to enable a deeper understanding of their theoretical underpinnings through each iterative engagement. This highlights that they cannot be taken at face value, they need iterative application, contextualisation and reflection on practice to activate and showcase their effectiveness.

19.3 Getting Started

It is important to note that our libraries share the same challenges we find in the literature; institutional barriers, academic hierarchies, organisational and structural change and the perceptions and misconceptions of the library's educational role in the university (Weiner, 2012). Introducing pedagogical models has affected transformational change in our libraries' teaching practice and has provided us with a way to overcome a range of dynamic institutional complexities in moving more firmly into the educational space. In conversation with libraries keen to adopt pedagogical approaches, we have often been asked the question—*How did you start?* It is important to note that there is no one way of starting, nor can we offer a 'step-by-step manual'. The reason for this is because the way in which different libraries might go about introducing and using pedagogical frameworks is dependent upon the parameters of each library's individual context and all the associated variables that shape it.

The following sections do however share our experiences gained over many years, from both our libraries, we offer practical advice and suggestions for adopting the models described in this book. We describe the two different strategies our respective libraries adopted to introduce our pedagogical frameworks to our library staff, and more broadly across our institutions. In the case of the MUL, we also describe how the RSD framework was introduced to Monash University's international campus in Malaysia.

We consider the similarities and differences of each approach for adoption, implementation and dissemination and hope this will spark ideas as to how you might go about starting at your library. We can, however, offer this advice—take a risk, create an opportunity and just start! All that is needed to begin is a committed passionate individual or the establishment of a community or practice with individuals with vision to drive the initiative and encourage interested others that share a desire to transform their teaching practice and in doing so their effectiveness in the curriculum.

19.3.1 From the Ground up: Adoption and Implementation at Monash University

As discussed in Chap. 2 (Torres and Yazbeck), the adoption, dissemination and implementation of the MELT frameworks at Monash University has involved several years of building expertise within the library through partnerships with academic staff. As there was experience applying the RSD with our Business and Economics colleagues, we saw an opportunity to model and promote how we envisioned using the frameworks—as a collaborative library–faculty endeavour from the outset.

Contrary to the usual way of introducing organisational initiatives through policy-driven methods, the RSD was implemented at MUL through advocacy from the ground up by library staff, later supported and promoted by library management. Not mandating expectations for staff to adopt the RSD provided a respectful and sensitive way of introducing an initiative to guide the library's teaching practice. A sensitive and considered implementation approach recognised that an education intervention needs space and time for staff to build the skills and confidence to transition to a reconceptualised teaching practice.

This notion is explained by Chappell (2003) in stating that 'new knowledge workers' changing work practices need time to renegotiate a sense of who they are in a reconstructed workplace (p. 136). Mezirow (2000) describes important phases that adult learners move through for transformational learning to take place. These phases were acknowledged by library management and involve i) a disorienting dilemma; ii) self-critical assessment of assumptions; iii) recognition through discourse that assumptions are shared by others; iv) exploration of new ideas and relationships; v) planning a course of action; and vi) taking action based on the new perspective developed through this process. A disorienting dilemma means an experience that contradicts one's long-accepted beliefs, or habits of mind.

In addition to needing time to adapt to change, library management also acknowledged the important role of professional agency in adopting the RSD framework, library management provided the emotional and intellectual space required for individuals to start applying the RSD framework when the time was 'right' for them. In this way management supported what Fuller and Unwin (2004) identify as 'diverse forms of participation and the extent to which individuals "elect to engage" in those opportunities through individual agency' (p. 32). The approach taken has been

highly successful and reflects a mature supportive workplace environment where past achievements are recognised and built upon, whilst steering towards a new vision. As such, the ownership required to transition to a new library teaching practice lay in the hands of the librarians and learning skills advisers themselves.

This self-regulatory approach to change is described by Hargreaves and Shirley as

> …a democratic and professional path to improvement that builds from the bottom, steers from the top, and provides support and pressure from the sides…committed and capable of creating deep and broad teaching and learning, it builds powerful, responsible and lively professional communities... (2009, p. 107)

Therefore, this sensitive approach to change recognised that support and guidance was provided by library management to effect internal organisational transformation at the pace that staff required.

Monash University Malaysia (MUM), on the other hand, applied a different method to implementing the RSD on their campus. Following the successful adoption of the RSD framework at Monash University Library Australia, Monash University Library, Malaysia (MULM) was keen to explore the benefits the RSD could bring to enhance the teaching capabilities of library staff, as well as a way to leverage library–faculty collaboration for students' research skill development. MULM also observed what Willison and O'Regan (2007) noted about different conceptualisations of research in academic circles. The authors describe that research can be conceived, in a minimalistic way, as a formal activity undertaken by an academic or researcher, rather than a skill set that is ideally developed and practiced progressively as part of an undergraduate's learning journey. This notion was impeding the library's ability to move forward as educators that contribute to students' research skill development in the curriculum. The Library Director at MULM identified that the RSD provided some significant benefits to address this issue, including.

> The adaptive and flexible structure of the RSD lends itself well as a campus strategy at MUM as it provides a language and structure in common to underpin educational efforts within the University to enhance student learning outcomes. (I. Eula, personal communication, 15 April 2020)

MULM also identified that the RSD framework offers a structure for research skill development within a learning continuum, a particular aspect of educational frameworks not generally considered. As such the RSD as a conceptual pedagogical model offered a practical way to scaffold and make research skills explicit in other discipline-based educational frameworks. Therefore, the RSD could co-exist with other educational frameworks already used by professionally accredited degrees.

> As the RSD offered a pedagogically sound approach it could be introduced to support the implementation of other frameworks currently incorporated into faculty teaching and learning at Monash University Malaysia. The RSD did not exclude or compete with other educational frameworks that schools were using. Therefore, the intention was to introduce the RSD as an educational campus strategy with the RSD framework co-existing alongside other educational frameworks in an intersected manner. In this way the RSD was in complete alignment with the educational goals of the University's Better Teaching Better Learning (BTBL) educational strategic agenda. (I. Eula, personal communication, 15 April 2020)

MULM's adoption of the RSD therefore presents a hybrid approach to adoption and implementation. By bringing the RSD framework into alignment with the BTBL agenda, MULM received university endorsement for the RSD as a recognised key campus strategy and incorporated in the Education Strategic Plans of 2016–2018 and 2018–2020, respectively (Eula & Santra, 2020). Of significance was the leadership role of the MULM in the RSD implementation, as the library was given the responsibility of leading the implementation strategy across the university. Building library staff and academic ability at MUM to apply the RSD followed the same successful novice to expert approach with guidance from library colleagues in Australia. Facilitating workshops and sharing collaborative examples of practice at university fora and educational events at MUM built knowledge and understanding together. The RSD has been successfully applied to the curriculum in a variety of innovative ways, which include the following: rubrics design (Kananatu, 2017); to inform creative writing courses (Wong & Yahya, 2017); to guide students' self-directed learning in Engineering (Balan et al., 2017) and to explore an adapted simplified version of the RSD framework (Karu et al., 2017).

It is important to note that although this was a campus strategy, personal agency was also considered to enable adoption, as such, some RSD early adopters championed the use of the RSD within their schools, where other schools have had varied degrees of engagement with the RSD. On both Monash Australia and Monash Malaysia campuses, the theoretical principles of Legitimate Peripheral Participation (Lave & Wenger, 1991) and supported adoption strategies (Hargreaves & Shirley, 2009) enabled a ground-up approach for implementation that was eventually endorsed at the institutional level. This has provided a gentle, considered approach and aligns with Galoozis' (2019) recommendations for high-impact changes to library teaching practices, rather than focusing on radical change. Small steps need to be taken by librarians to increase skills, confidence and autonomy to gradually effect change to practice. A scaffolded, progressive and incremental approach mirrors the theoretical underpinnings of the MELT frameworks themselves.

19.3.1.1   Developing Staff Capacity and Confidence with the MELT

A learning ethos for developing, encouraging and building the capacity of library staff has historically been part of everyday work practice and strongly valued by library management. Smith and Sadler-Smith (2006) describe this as a 'learner centered paradigm', where the 'workplace support space' facilitates and enables learning through a combination of self-directed learner development and workplace learning strategies to achieve the organisation's objectives. A diverse and supportive learning environment was therefore already in place for library staff (43 effective full-time librarians and learning skills advisers) to commence engaging with and exploring the RSD, through self-directed, guided, formal and informal learning opportunities.

The first of the MELT frameworks, the RSD framework was introduced at MUL in 2009 through a workshop titled: 'RSD Bring a Friend (BaF) Workshop'. This workshop was co-facilitated with library staff and academic colleagues from the

Faculty of Business and Economics (see Chap. 2 by Torres and Yazbeck). To model the collaborative potential of the RSD and a partnership approach from the outset, librarians and learning skills advisers invited an academic colleague with whom they had already established a working relationship to participate in the workshop. Invitations to attend the workshop were well received, with librarians and learning skills advisers ($N = 15$) attending alongside their academic colleagues ($N = 13$) from seven faculties: Arts, Business and Economics, Law, Medicine Nursing and Health Sciences, and Pharmacy and Pharmaceutical Sciences. In an attempt to create an equal footing and break down academic hierarchies at the workshop, librarians, learning skills advisors and academics engaged in the workshop activities together to create their first shared experience of the RSD framework.

The transition from a transactional service model to engaging with academics in a partnership underpinned by pedagogy required librarians to engage in professional risk taking. As mentioned earlier this adoption strategy required sensitivity and respect from library management for the RSD to succeed. Fundamental to the success of the collaborative potential of the RSD framework was the professional shift librarians needed to make from librarians as instructors, to librarians as collaborative educators. Some RSD partnerships with academic staff were established as a result of this workshop and as such, were ready to build examples of practice and commence championing the RSD amongst library and academic colleagues in a range of disciplines.

Of particular value as an approach to building skills and capabilities for adoption, the MELT over the years has been the 'novice to expert' learning model (Lave & Wenger, 1991). Participation through this approach has gradually increased library staff confidence to commence applying the MELT to their teaching practice. As opportunities arose and sufficient understanding and knowledge of the MELT had been built, library staff introduced the model to inform teaching collaboration with academic colleagues. A novice to expert capacity building has also created opportunities for library staff to work across library faculty teams, so that expertise is developed for faculty teams amongst faculty teams. This has facilitated a sustainable and cost-effective way to learn through cross-fertilised disciplinary exemplars of the MELT in practice, effectively breaking down some of the silos existing within library organisational structures themselves.

19.3.2   From the Top Down: Adoption and Implementation at La Trobe University

In 2009, 10 curriculum renewal pilot projects were commissioned across the university as part of a new university curriculum plan, *Design for Learning* (DFL). Curriculum review and renewal played out differently in each discipline project but DFL informed what faculties did in relation to improving the academic success of all undergraduate students. Common to each project was mapping what is core

and required for each undergraduate course, embedding graduate capabilities into every course and subject, specifying Intended Learning Outcomes (ILOs) for these capabilities and making ILOs explicit to students. The library led a DFL project to embed information literacy into the curriculum; this was 'the first step in a larger vision of all La Trobe University graduates being information literate' (Salisbury & Sheridan, 2011). The library project developed a university strategy for embedding information literacy skill development and created a suite of reusable, multipurpose information literacy learning objects. As part of the project we leveraged our previous experience collaborating with the Faculty of Health Sciences to embed information literacy skills into the common first year in Health Sciences and evaluation of student learning outcomes in Health Sciences was a critical component of the library DFL project.

The notion of constructive alignment was central in the implementation of DFL projects. As a university-wide programme, DFL had all the hallmarks and strengths of top-down institutional approaches to implementing constructive alignment identified by Ruge et al. (2019). That is, it was institutionally defined, rigorous, systematic, accountable, provided resourcing and support to all areas of the organisation, encouraged staff ownership and provided upskilling for academic and professional staff involved in teaching and learning. Being involved in an institutional implementation of constructive alignment helped us build on the best of our previous approaches to embedding information literacy in more deliberate and intentional ways to realise institutional strategy. It opened up a theory/practice nexus that at the time created new opportunities and laid the foundations for the LTUL Model and continues to underpin our practice and provide ongoing motivation for theory-based practice.

Our commitment to providing all students with opportunities to develop high levels of information literacy is constant and certainly needs institutional approaches; however, in our experience achieving high-level strategic objectives is an iterative process that requires constant review. The Information Literacy Strategy developed as part of the 2009 project has since been reviewed, reinvented and replaced—firstly with the La Trobe Information Literacy Policy and Procedure and then with the La Trobe Digital Literacy Framework. Likewise, what learned from the 2009 project informed the LTUL Model and LLTP Framework, however, as discussed in Chap. 3 by Salisbury and Ondracek the LLTP Framework is a dynamic and iterative guide to practice that is adapted as needed to align with new curriculum design initiatives and plans. For example, in the Curriculum Design Intensive (CDI) project that established curriculum design teams that include discipline teaching staff, educational designers and librarians to improve and review subjects.

In summary getting started has been top down. However, ongoing sustainability and implementation of the LTUL Model using the LLTP Framework has been a dynamic, multidirectional and iterative process. As Ruge et al. (2019) propose, what is needed is

> a multi-directional approach for developing and implementing constructive alignment (CA) to leverage the strengths as well as constraints embedded in the existing top-down or bottom-up approaches. It is recognised that the top-down framework has a clearly defined driver and hence the aims of the process and the approval process are clearly defined. In the bottom-up

approach, the teaching team and close connection to students in the course programme are the key drivers for the process and ultimate teaching and learning outcomes. (p. 843)

Our ongoing practice to implement the LTUL Model guided by LLTP Framework could be considered in terms of a multidirectional mix of top down and bottom up. Taking this perspective, means we need to continue to work across the following three domains of practice in linking the library to the curriculum:

1. Strategic—Institutional policy for information and digital literacies as related to Graduate capabilities.
2. Course—Mapping Information literacy as a component of Graduate Capabilities ('Research and Evidence-Based Inquiry' and 'Digital Capability') within subjects and across year levels to scaffold sequential IL skill development.
3. Subject—Embedded and constructively aligned—joining IL and subject ILOs, teaching and learning activities and assessment tasks.

Working across these three domains has enabled us to embed information skill development for all students in curriculum design. Collaboration with discipline teaching staff and our pedagogical model is now standard practice across all disciplines. Regardless of whether it is through participation in curriculum design teams, or ongoing or new curriculum conversations between academics and librarians, the LLTP Framework is entrenched into our professional practice. According to Spain (Chap. 4), the LLTP Framework is a 'pedagogical reference point for new librarians'. Importantly taking a multidirectional perspective means the above domains of practice aren't sequential and for a library starting out on this journey, opportunities can be created and seized in one or all domains as needed to suit the institutional context and environment.

19.3.3 Igniting Interest and Gaining Momentum

Gaining buy-in from library and academic staff building capacity to apply the tools has been critical and could be considered the biggest challenge. Igniting interest and maintaining momentum at our universities has been reliant on keeping the models front and centre of our libraries teaching practice through formal and informal interactions. This takes effort and sustained commitment so that the models are normalised as part of the library's teaching practice and culture. Gaining buy-in at our libraries has been achieved by a range of the following:

- Introducing new staff to the models as part of staff induction
- Incorporating a standard agenda items for the adopted models in relevant library committee meetings
- Delivering staff development workshops annually or bi-annually on the models
- Developing elearning resources for staff to learn about the models
- Staff mentoring

- Applying the models to a wide variety of disciplines, years levels and learning objects to gather a range of examples
- Sharing examples of application amongst peers and more broadly at faculty, university meetings and fora
- Presenting at educational conferences as well as those that pertain to the library sector
- Researching practice and keeping active in the educational research space, journal publications
- Establishing a Community of Practice—inviting interested educators beyond the library
- Connecting to other areas of the university—career advisory services, research office, etc.
- Gathering meaningful metrics, quantitative and qualitative (after establishing traction).

Maintaining momentum is also reliant on recognising the potential of both formal and informal learning opportunities for library and academic staff. At LTUL the formal and informal are part of the library staff development. At MUL a novice to expert approach has underpinned formal and informal opportunities to learn about the MELT. Learning has taken place over 'water-cooler' or 'coffee queue' conversations, one-to-one shared exchanges of the teaching applications of the MELT, as well as scheduled peer-to-peer learning opportunities, peer teaching observations and MELT showcase events. For example, an RSD framework conference was organised by MUL with invitations extended at the national and international level to promote the RSD for students' research skill development. The conference was attended by 180 delegates comprising librarians and academic staff. Another success has been the dissemination of the RSD framework through university-level workshops delivered to academic staff through the Graduate Certificate of Higher Education (GCHE) and for accredited professional development activities for academic staff over the years. This engagement at the university level led to educational policy endorsement of the RSD framework at Monash University.

The importance of collecting quantitative metrics as well as qualitative data on how our pedagogical models have been applied by telling and publishing stories of impact cannot be understated. Metrics collected on the MELT, for example, include information related to which Skill Facets in the MELT frameworks were addressed in learning engagements and how these skills aligned with the MELT's learning continuum—the Scope of Student Autonomy. More granular metrics are also collected on whether library engagement with the MELT has impacted assessment design, learning outcomes, assessment criteria, learning content and whether the skills contributed by the library are assessed in the curriculum and have been embedded into the curriculum.

At MUL, we have used collaborative opportunities to unpack the skills in the MELT frameworks. This involves a collaborative discussion between educators to consider what discipline-specific skills are encapsulated in each of the six facets of the RSD, WSD or DSD frameworks. This is the first step taken to make the conceptual

models meaningful to context, and can occur in a MELT workshop setting or when an opportunity to apply one of the MELT in a learning context is presented. The process of revealing and articulating the skills relevant to the discipline in alignment with the MELT Skill Facets opens a way to connect them to the curriculum (see Chap. 18 by Todd, Khoshsabk, Torres and Peart; Chap. 15 by Pilz, McLeod and Yazbeck).

For individuals applying pedagogical models for your collaborative teaching practice, we suggest approaching this the following way:

- Align learning aims against the appropriate framework
- Identify the skills in the task that students need to acquire to engage successfully with the task
- Scaffold skills in learning activities and tasks
- Make the skills explicit in your teaching using skill-related terminology appropriate to the discipline
- Consider how skills could be made skills explicit in assignment instructions and learning aims/outcomes
- Over time, as your collaboration and influence grow, consider if the skills can be included in corresponding marking schemes/ rubrics.

Our advice is, whether you are considering introducing a pedagogical model to linking the library to the curriculum at the individual or organisational level, or whether you decide to adopt an implementation strategy from the 'bottom up' or 'top down', we strongly recommend the following. Start small to build advocacy, create examples of application and share these with colleagues you are comfortable with. If you plan to use the models for collaborative partnerships—start the way you intend to finish—collaboratively, as this creates a nurturing learning environment for reflection on practice and change to take place. Above all… start small, but take a risk!!

19.4 Conclusion

A sustained and undeniable effort has been brought into play by academic libraries to leverage IL as the specialist knowledge and expertise that librarians bring to the teaching and learning function of the university. As this is an educational strategic imperative stated by many libraries globally, it is critical that the sector pays attention to *how* this can be achieved successfully and at scale, so that it no longer remains an elusive aim of the academic library. Our practice-based examples align with findings in the literature identifying that partnership approaches are the most effective way to reach students meaningfully and at the point of need in their learning. This is emphasised by Weiner (2012) noting that information literacy should be developed progressively throughout the formal educational process and in disciplinary-specific contexts. We have identified a strategy for success in this regard.

The practice-based examples in this book clearly evidence that truly embedded skill development in disciplinary contexts is reliant on theoretically informed

teaching partnerships. To this end, pedagogy informs: *how* the IL and research skills are embedded as considered aspects of learning, *how* they become woven seamlessly and explicitly into curriculum and assessment design, *how* they are articulated to students so that the skills become a part of their awareness and vernacular, and *how* they become valued by educators as fundamental skills that enable students to 'learn to learn'. Pedagogically informed teaching partnerships therefore create the right ecosystem for nurturing, what Weiner (2012) refers to as 'students' habits of mind' (p. 287).

Critical to our success are the following key factors. Pedagogical knowledge acquired over time through the application of the models has built the necessary skills to move from transactional instructors to sophisticated educators. Therefore, engagement with and application of pedagogically informed models for developing students' information and research skills has shifted the professional identity of librarians. As the practice-based examples confirm, and comments from academic colleagues recognise, this has transformed the perceptions held of the librarian's role in the curriculum in our institutions. Establishing partnerships with academic colleagues is therefore fundamental to and critical for embedding information and research skills in disciplinary curricula, and the importance of 'trust' in these relationships cannot be disputed. Our experience clearly shows that the presence of trust is a critical success factor which can be enabled through conversation using a language in common. Our pedagogical models have guided these important conversations, provided clarity of purpose and structure for the teaching partnership. As such, the application of theory to practice demonstrates how the professional identity of librarians as educators can be recast in trusted partnerships, and how all combined gives us a deeper understanding of what needs to transpire to transition and transform library skill development programmes for a more impactful connection to the curriculum.

As the practice-based examples in this book have illustrated, connecting the library to the curriculum is core work for libraries. This work is nuanced and complex and requires the skill development to be interwoven with discipline content; library staff are well equipped with the expertise and knowledge to weave the threads of information and research skills into the fabric of the curriculum. With critical foundational organisational support from the bottom, steering from the top and a squeeze from the sides, library staff will find themselves in the right environment to build pedagogical knowledge, teaching skills and confidence to work in trusted collaborative alliances as partners with their academic colleagues.

Cyclic change is a constant in the higher education environment and with this comes the strategic renewal of educational agendas and plans. In an environment where ways of working can be impacted by considerable disruption, the importance of harnessing the skills and expertise of a range of educators that focus on the same trajectory—enhancing student learning outcomes—cannot be emphasised enough. Atkinson (2019) stresses that effective collaboration between library, faculty and university is not an option but a necessity in academic environments navigating a range of challenging economic and institutional pressures. Therefore, positioning the library as a key partner in enabling the educational goals of the university is of paramount importance to render the library visible to university leaders (Atkinson,

2019; Bryant et al., 2020). Understanding the critical success factors, characteristics and strategies that are required to connect the library to the curriculum, therefore increase in significance.

Finally, the conceptual pedagogical models adopted at MUL and LTUL have enabled the contextualisation and scaffolded development of information and research skills through trusted partnerships with academic colleagues. This has led to greater effectiveness, visibility and impact of our libraries in the educational space demonstrating transformational leadership in an area of strategic importance for academic libraries globally. We conclude and strongly advocate that theoretically informed pedagogical models are critical for connecting the expertise of the library to the curriculum.

References

Atkinson, J. (2019). Collaboration by academic libraries: What are the benefits, what are the constraints, and what do you need to do to be successful? *New Review of Academic Librarianship, 25*(1), 1–7. https://doi.org/10.1080/13614533.2019.1575016

Australian & New Zealand Institute of Information Literacy (ANZIIL). (2004). *Australian and New Zealand information literacy framework: Principles, standards and practice (2nd ed.).* A. Bundy (Ed.). Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Balan, P., Tran, M. H., & George, S. (2017, December). *Application of Research Skill Development (RSD) in sustainable engineering teaching and learning.* [Paper presentation]. 28th Australasian Association for Engineering Education (AAEE) Annual Conference, Sydney, Australia. Retrieved from https://search.informit.com.au/documentSummary;dn=395496205962016;res=IELENG

Bandaranaike, S. (2018). From research skill development to work skill development. *Journal of University Teaching & Learning Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/7.

Bandaranaike, S., & Willison, J. (2009, 2018). Revised by Monash University Library, 2019. *Work Skill Development framework*. Retrieved from https://www.monash.edu/__data/assets/pdf_file/0005/1719401/WorkSkillsDevt-2019.pdf

Bryant, R., Dortmund, A., & Lavoie, B. (2020). *Social Interoperability in research support: Cross-campus partnerships and the university research enterprise.* Dublin, Ohio, USA: OCLC Research. Retrieved from https://www.oclc.org/research/publications/2020/oclcresearch-social-interoperability-research-support.html

Bundy, A. (2004). *Australian and New Zealand information literacy framework: Principles, standards and practice.* Adelaide: Australian and New Zealand Institute for Information Literacy. Retrieved from https://www.utas.edu.au/__data/assets/pdf_file/0003/79068/anz-info-lit-policy.pdf

Chappell, C. (2003). *Reconstructing the lifelong learner: Pedagogy and identity in individual, organisational, and social change.* RoutledgeFalmer.

Coleman, A. (2012). The significance of trust in school-based collaborative leadership. *International Journal of Leadership in Education, 15*(1), 79–106. https://doi.org/10.1080/13603124.2011.578755

Eula, I., & Santra, N. (2020). *Report on RSD Strategic Initiative 2016–2019: Implementation, achievements and impact.* Monash University Malaysia. Retrieved from https://www.monash.edu.my/__data/assets/pdf_file/0003/2170335/rsd-initiative-report.pdf

Fuller, A., & Unwin, L. (2004). Expansive learning environments: Integrating organizational and personal development. In A. Fuller, A. Munro, & H. Rainbird (Eds.), *Workplace learning in context* (pp. 126–145). Routledge.

Galoozis, E. (2019). Affective aspects of instruction librarians' decisions to adopt new teaching practices: Laying the groundwork for incremental change. *College & Research Libraries, 80*(7), 1036–1044. https://doi.org/10.5860/crl.80.7.1036

Hallam, G., Thomas, A., & Beach, B. (2018). Creating a connected future through information and digital literacy: Strategic directions at The University of Queensland Library. *Journal of the Australian Library and Information Association, 67*(1), 42–54. https://doi.org/10.1080/24750158.2018.1426365

Hargreaves, A., & Shirley, D. (2009). *The fourth way: The inspiring future for educational change.* Corwin Press.

Johnston, N. (2020). The shift towards digital literacy in Australian university libraries: Developing a digital literacy framework. *Journal of the Australian Library and Information Association, 69*(1), 93–101. https://doi.org/10.1080/24750158.2020.1712638

Kammerlocher, L., Couture, J., Sparks, O., Harp, M., & Allgood, T. (2011). Information literacy in learning landscapes: Flexible, adaptable, low-cost solutions. *Reference Services Review, 39*(3), 390–400. https://doi.org/10.1108/00907321111161395

Kananatu, T. (2017, December 11–13). *Using the research skill development framework to construct marking rubrics for law assessments.* [Paper presentation]. I-MELT (Models of Engaged Learning and Teaching) Conference. Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/309/kananatuimelt2017paper.pdf

Karu, P., Tran Minh, H., & Sta Maria, B. (2017, December 11–13) *Using the optimising problem-solving pentagon as a basis for research skills in final year engineering.* [Paper presentation]. International conference on Models of Engaged Learning and Teaching (I-MELT), Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/408/purushimelt2017paper-1.pdf.

Kranich, N., Lotts, M., Nielsen, J., & Ward, J. (2020). Moving from collecting to connecting: Articulating, assessing, and communicating the work of liaison librarians. Portal: Libraries and the Academy, 20, 285–304. doi:https://doi.org/10.1353/pla.2020.0015.

La Trobe University Library. (2019). *Library learning and teaching partnership framework.* Melbourne: La Trobe University. Retrieved from https://doi.org/10.26181/6051815fa87e

Lave, J., & Wenger, E. (1991). *Situated learning legitimate peripheral participation.* Cambridge University Press.

McLeod, A., & Torres, L. (2020, April 6–9). *Enhancing first year university students' digital skills with the Digital Skill Development (DSD) framework.* [Paper presentation]. SITE (Society for Information Technology and Teacher Education) Online Conference, New Orleans, LA. Retrieved from https://www.learntechlib.org/p/216019/

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress.* Jossey-Bass.

Moselen, C., & Wang, L. (2014). Integrating information literacy into academic curricula: A professional development programme for librarians at the University of Auckland. *The Journal of Academic Librarianship, 40*(2), 116–123. https://doi.org/10.1016/j.acalib.2014.02.002

Namaganda, A. (2020). Continuing professional development as transformational learning: A case study. *The Journal of Academic Librarianship, 46*(3), 102–152. https://doi.org/10.1016/j.acalib.2020.102152

Osborn, J. (2017). Librarians as teachers: Forming a learning and teaching community of practice. *Journal of the Australian Library and Information Association, 66*(2), 162–169. https://doi.org/10.1080/24750158.2017.1328633

O'Sullivan, C., Slocombe, A., McKenzie, C., & Salisbury, F. (2019, June 23–27). *Digital dexterity: A sustainable model for building essential skills for the future workforce.* [Paper presentation]. Proceedings of the IATUL Conferences. Paper 5. Perth, Western Australia. https://docs.lib.purdue.edu/iatul/2019/bp/5

Peacock, J. (2001). Teaching skills for teaching librarians: Postcards from the edge of the educational paradigm. *Australian Academic & Research Libraries, 32*(1), 26–42. https://doi.org/10.1080/000 48623.2001.10755141

Pham, H. T., & Tanner, K. (2015). Collaboration between academics and library staff: A structurationist perspective. *Australian Academic & Research Libraries, 46*(1), 2–18. https://doi.org/10.1080/00048623.2014.989661

Ruddy, C., & Ponte, F. (2019). Preparing students for university studies and beyond: A microcredential trial that delivers academic integrity awareness. *Journal of the Australian Library and Information Association, 68*(1), 56–67. https://doi.org/10.1080/24750158.2018.1562520

Ruge, G., Tokede, O., & Tivendale, L. (2019). Implementing constructive alignment in higher education—Cross-institutional perspectives from Australia. *Higher Education Research & Development, 38*(4), 833–848. https://doi.org/10.1080/07294360.2019.1586842

Salisbury, F., Arndell, M., & Lewin, K. (2016). A digital literacies community of practice for Australia. *Incite, 37*(7/8), 24–25. Retrieved from https://search.informit.com.au/documentSumm ary;dn=170788258778258;res=IELHSS

Salisbury, F., Karasmanis, S., Robertson, T., Corbin, J., Hullet, H., & Peseta, T. (2012). Transforming information literacy conversations to enhance student learning: new curriculum dialogues. *Journal of University Teaching & Learning Practice, 9*(3), 1–14. Retrieved from http://ro.uow.edu.au/jutlp/vol9/iss3/4

Salisbury, F., & Sheridan, L. (2011). Mapping the journey: Developing an information literacy strategy as part of curriculum reform. *Journal of Librarianship and Information Science, 43*(3), 185–193. https://doi.org/10.1177/0961000611411961

Schachter, D. (2020). Theory into practice: Challenges and implications for information literacy teaching. *IFLA Journal, 46*(2), 133–142. https://doi.org/10.1177/0340035219886600

Seashore Louis, K. (2007). Trust and improvement in schools. *Journal of Educational Change, 8*(1), 1–24. https://doi.org/10.1007/s10833-006-9015-5

Smith, P., & Sadler-Smith, E. (2006). *Learning in organisations: Complexities and diversities.* Routledge.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. SAGE Publications.

Torres, L. (2018). Research skills in the first year biology practical—Are they there? *Journal of University Learning & Teaching Practice, 15*(4). https://ro.uow.edu.au/jutlp/vol15/iss4/3

Torres, L., Bandaranaike, S., & Yates, S. (2014, June 2–4). *'What skills do I have? What skills will I need?'—Building an employability skills profile through an online reflective learning program.* [Paper presentation]. 10th International Symposium on Cooperative and Work-Integrated Education, University West, Trollhattan, Sweden. https://researchonline.jcu.edu.au/38450/

Torres, L., & Jansen, S. (2016). Working from the same page: Collaboratively developing students' research skills across the university. *Council for Undergraduate Research (CUR) Quarterly, 37*(1), 26–33. http://dx.doi.org/https://doi.org/10.18833/curq/37/1/9

Torres, L., McLeod, A., Yazbeck, B., Rayner, G., Skrbis, M., Yates, S., Dickson, N., & Fulton, H. (2018). *Digital skill development framework.* Retrieved from https://www.monash.edu/__data/assets/pdf_file/0010/1652437/DSD-22.05.20.pdf

Weiner, S. A. (2012). Institutionalizing information literacy. *The Journal of Academic Librarianship, 38*(5), 287–293. https://doi.org/10.1016/j.acalib.2012.05.004

Willison, J. (2017). *The Models of Engaged Learning and Teaching (MELT).* Retrieved from https://www.adelaide.edu.au/melt/

Willison, J. (2018). Research skill development spanning higher education: Critiques, curricula and connections. *Journal of University Teaching and Learning Practice, 15*(4). Retrieved from https://ro.uow.edu.au/jutlp/vol15/iss4/1

Willison, J. (2020). How do we arrange? *The models of engaged learning and teaching: connecting sophisticated thinking from early childhood to PhD* (pp. 61–82). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-15-2683-1_3

Willison, J. (2020). *The models of engaged learning and teaching: Connecting sophisticated thinking from early childhood to PhD.* Singapore: Springer Singapore. https://link.springer.com/book/https://doi.org/10.1007/978-981-15-2683-1

Willison, J., & O'Regan, K. (2006, 2018). *Research skill development framework*. Retrieved from https://www.adelaide.edu.au/melt/ua/media/51/rsd-framework.pdf

Willison, J., & O'Regan, K. (2007). Commonly known, commonly not known, totally unknown: a framework for students becoming researchers. *Higher Education Research & Development, 26*(4), 393–409. https://www.tandfonline.com/doi/abs/https://doi.org/10.1080/07294360701658609

Wong, T., & Yahya, E. (2017, December 11–13). *Towards a more cogent curriculum for experimental writing: a case study.* [Paper Presentation]. I-MELT (Models of Engaged Learning and Teaching) Conference, Adelaide, Australia. Retrieved from https://www.adelaide.edu.au/melt/ua/media/300/wongimelt2017paper.pdf

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