



Creativity Policy,
Partnerships and
Practice in Education

**EDITED BY
KIM SNEPVANGERS,
PAT THOMSON AND
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Creativity,
Education
and
the Arts



Creativity, Education and the Arts

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This series emerges out of recent rapid advances in creativity- and arts-informed research in education that seeks to reposition creativity studies within (and in conversation with) education as a multi- and interdisciplinary field.

This series takes as its starting point the interrelationship between arts-based research and a growing neuroscientific, cultural and economic discourse of creativity and creative industries, and the need for education to play a larger role in these expanding discourses. It also takes as a priori an invitation to creativity scholars to move more robustly into theorising the work of arts- and creativity-based research work, bridging a historical gap between ‘science’ and ‘art’, between ‘theoretical’ and ‘applied’ approaches to research, and between qualitative and quantitative research paradigms.

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To artistic collaboration and partnership in creative ecologies

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Thanks to the Palgrave book series *Creativity, Education and the Arts* (series editor Anne Harris) which has expanded the field of creativity education scholarship, and played a role in facilitating trans- and interdisciplinary conversations and experiments. The book series, now in its third year and with over ten titles already published, is attracting consistently more readers and writers, a sign we see as a healthy pulse for this area of study.

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Praise for *Creativity Policy, Partnerships and Practice in Education*

“In 2021 PISA will for the first time ever test Creative Thinking alongside mathematics, science, and reading. Understanding the policy and practice issues underpinning this vitally important capability is one of the key issues facing educators across the world today. *Creativity Policy, Partnerships and Practice in Education* is an imaginative, scholarly, practical, challenging and timely set of thought-pieces which is certain to stimulate productive debate and useful activity. This book is essential reading for policy-makers, researchers and practitioners alike who want to embed creativity and creative thinking in all aspects of education.”

—Professor Bill Lucas, *University of Winchester, UK*

“This outstanding contribution to the field of creativity and creative education, digs deep into key areas that require our understanding and attention. The collection surfaces and celebrates the values of communal practices and nurturing; placing creativity at the heart of social, environmental and educational change.”

—Professor Jonothan Neelands, *Warwick Business School, UK*

“If you think that Creativity is frequently highly valued, yet deemed something impossible to teach and difficult to learn, then read this book. It is a calm, sensible, wide-ranging, well written and well evidenced collection of essays showing how schools, higher education and education system themselves can develop effective and enjoyable programmes and policies to put creativity at the heart of a modern vision for education.”

—Professor Julian Sefton Green, *Deakin University, Australia*

“In this book leading international scholars shape major theoretical and organisational achievements in creativity. When Creativity is fused with the three ‘Ps’ – Policy, Partnerships and Practice, a dynamic network of refreshed and urgently needed educational possibilities are wide open.”

—Professor Julianne Moss, *Deakin University, Australia*

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Evolving Ecologies: Creative Policy, Partnerships and Practice in Education

Anne Harris, Kim Snepvangers, and Pat Thomson

Our global community is now faced with enormous environmental, political, economic and social challenges, all requiring creative responses. Making our collective way through the 21st century will arguably take all of our creative thinking, doing and being. It is not clear that school education, charged with the generational transfer of knowledge, skills, attitudes and values, is up to this task. The benefits of education are inequitably distributed. If we are to have ‘futures-producing schools’ then

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we have some way to go in reimagining what education may be like. One resource for rethinking education is in educational research in general, and creativity research in particular.

Creativity as a field of research has a long history in education-related disciplines including aesthetics, design, and developmental psychology. Once creativity in education was predominantly approached as an elite skill of gifted individuals, requiring a streamed ‘talent development’ approach to the lucky few. Today, however, creativity is being reconceptualised as a basic human characteristic that can be enhanced in all individuals, and indeed must be fostered for contemporary mobility, employability success, and self-realisation in networked global culture. This book positions itself in this new field, approaching creativity through a range of diverse and emerging lenses including creative ecologies and ecosystems, design thinking, and those within arts education who advocate for a re-integration of the arts ‘A’ in STEAM education, a transdisciplinary answering back to the narrowing STEM agenda that seeks to polarise science ‘versus’ arts as ways of understanding and instrumentalising the creativity imperative.

This book focuses primarily on challenges and opportunities within the UK/Australian educational systems. These two education landscapes have family patternings arising from Australia’s colonial and British imperial history; the two are more like each other than either is to the USA or other geopolitical education landscapes. While we note that US scholarship does not always contextualise itself as materially and culturally ‘placed’, here it is necessary to note the geographical but also cultural similarities of the UK, Australia and Canada where our contributors are based. These histories are alive in our culturally-emergent orientations as ‘global’ makers, leaders, workers and they inform our responses to – and with – US definitions of creativity, innovation, design and the arts. You will see many of these threads defined and extended across the widely diverse chapters in this book. While dominated by Australian/UK perspectives, it is not limited to them, and indeed one purpose of the volume is to make transparent the interweaving scholarship from non-American contexts that is concerned with many similar – but some importantly different – perspectives than those advanced in American-focused and American-situated scholarship. For example, Kathleen

Gallagher's chapter on multi-sited ethnography emerges not only from a Canadian context, but from the diverse geopolitical contexts in which her longitudinal study lives and thrives – mostly non-white, non-western global locations.

We have brought together a collection of scholars working both empirically out of secondary and tertiary research and curricular contexts. These writers' research is grounded in the realities of both secondary education and the challenges in higher education of offering a curriculum that will allow a new generation of teachers to teach creativity effectively, and to develop responsive forms of holistic assessment. But some authors here also importantly advance conceptual and methodological innovations incorporating more interdisciplinary heuristics like design thinking and co-design approaches.

As with many conversations about creativity in education, this book includes those who argue from an arts perspective, not always present in more generalist creativity studies (outside of education), nor always evident in metacognitive approaches to creativity education. Many of our contributors see creativity as a domain within the arts and through which the arts expands out into transdisciplinary dialogue with others in and beyond education. The book also brings new geographical, theoretical and disciplinary perspectives to well-worn debates about creativity across the curriculum, the assessment of creativity, and how best to foster creativity in compulsory schooling in diverse contexts.

Why Policy, Partnerships, Practice

Creativity is a hot topic in education. Surprisingly there are few competing or comparable titles that address creativity in education, particularly through the lens of the arts and transdisciplinarity. While we have organised this book's three sections with intent, the nature of creativity education research also breaks out of those boundaries. For example, Part I also deals with curriculum, while Part III introduces issues of action research. This book is firmly guided by professional academic practice including innovative theorising, and we apply the 'so what' question to all good research: who is benefiting from it? For whom is this work? This book

answers those questions in theoretical, applied, and policy and curriculum ways.

We have ambitious aims for this book. It has been written with an eye to contemporary debates in creativity education, and future workforce preparation. We hope it will be both affirming but also challenging to creativity theorists, industry-based creatives and culture-workers, and creative practitioners and educators. We see it as a guided seminar discussion for pre-service teachers, or teachers who are returning for advanced degrees; in such contexts, the writing will provoke lively conversations around new approaches to curriculum, pedagogy, and assessment. While there are now numerous publications on creativity in education, very few approach creativity in transdisciplinary teacher education, particularly through the perspective of the arts (Blumenfeld-Jones 2016; McIntosh and Warren 2013). The book will be of use in pre-service art education classrooms and in art education graduate programmes.

The book may be most useful in programmes that are exploring transdisciplinary connections in teacher education, and indeed the widespread transdisciplinary obsession with STEM/STEAM and design thinking approaches to all workplace and higher education endeavour. And, although the book primarily reflects an Australian/UK perspective, we trust it will find wide readership in all communities of practice who seek an expanded view of creativity research, particularly creative education research.

Creative Ecologies

This volume contributes to contemporary creativity education by re-imagining new creative ecological networks, relationships and events. Our goal is threefold: (1) to encourage a more complex approach to creative onto-epistemologies, (2) elaborate critical theoretical approaches to creativity in educational contexts, and (3) contribute to more synthesised and networked approaches to changing education policy to better foster, understand and teach creative mindsets, skills and values.

The authors in the book explore specifically-designed strategies that anticipate sustainable concepts of creative learning as and beyond

partnership, threaded with a more widely attended digital approach to tertiary contexts, with a strong focus on teacher education. The growing interest in creativity in education settings over the past 10 years extends to both formalised academic curricula and policy, as well as a stepping off point for encouraging new understandings of creative economies, and a re-integrated 'creative and cultural industry' approach to the education-workforce continuum. We invited these authors to consider how diverse representations and enactments of creative mentorship (hosts/collectives/business), projects (negotiated events or opportunities rather than institutionalised and static programmes such as internships), and digital transformations have come to matter, engaging with and linking artistic and creative research practice with career pathways in creative (particularly digital) ecosystems, and a renewed interest in more holistic pursuits of living a 'good life' rather than just a 'successful' life defined solely in economic terms. We build upon the foundations not only of design thinking, creative economies, and poststructural theory, but also the 'wise creativity' (2013) of Anna Craft, who theorised the ways in which contemporary creativity in education offers us a mirror to consider our cultural and individual values, aspirations, and relationships to both human development but also ecological sustainability.

The chapters extend contemporary work on creative economies, linking what some would call a crisis in the natural environment and the creative industry/business sector. The authors move beyond the realm of informing individual creativity, towards equipping students with network connectivities through developing (creative) education ecologies, ecosystems in which nodes are linked by threads of practice and flows. They eschew a more traditional, atomised approach to developing creative individuals. Sustainable and mutually-informing relationships between creativity and science are seen as a necessary tool for change, development and management of new concepts of creative economies. The entrepreneurial figure becomes a socially engaged student who actively conducts themselves as a socially responsible innovator, learning to synthesise the need for original ideas, market value writ broadly, and the pleasure of creative play or making (also known as a DIY ethic).

More nuanced understandings of entrepreneurship are required in creative ecologies to help move beyond a 'human capital' approach to

developing and populating global 21st century workforces. Emerging scholarship encourages a networked approach in which mentors, projects and mentees are in relationship as co-‘inhabitants’ (Marttila 2018, p. 576), who intrinsically seek to develop and upgrade skills and understandings. The ways in which mentors, projects and digital platforms prefigure the interstice, places the entrepreneur as an “‘implementer’ ... because internationally competitive knowledge intensive production came into being as a result of the aspirations of entrepreneurial subjects to bring about economic innovations” (Marttila 2018, pp. 576–577). Several authors here argue in favour of greater institutionally supported resources for dynamic and transdisciplinary creativity.

This book additionally advances understandings about the ways in which creative risk-taking and synthesising strategies can be designed alongside two key concerns of educational environments: equity and sustainability. For many teachers, creativity is inherently collaborative, non-hierarchical, and critically reflexive (i.e. concerned with sustainability). Yet creative industries has sometimes been critiqued as ‘innovation for innovation’s sake’ (Craft et al. 2007), and the authors here take this call to a greater creative sociality as a foundational concept.

In the context of understanding creative partnerships and careers as dynamic yet precarious journeys in diverse and rapidly-changing environments, questions about how the constraints of contract employment, global workforces, and multinational corporations’ extreme profit-focus and micro-cultures arise. In contemporary art and design practice, for example, there is a great deal of interest in transdisciplinary art/science collaborations, and exploring how living on edges, boundaries and in transitory/extreme environments can expand understanding of living systems and lived experiences, with greater consideration of both the constraints and resources at play for both humans and more-than-humans.

Organisation of This Book

We are pleased to present these diverse and rich chapters from leading scholars in the UK, Australia and Canada. While the contributions orient towards the titular meta-categories of policy, partnerships and practice, there are important sub-themes to note.

Firstly, more than a third of the submissions address or include the notion of ‘creative ecologies’, reflecting a recent shift in approaches to fostering creativity in schools from a singular ‘teaching’ and/or ‘learning’ orientation, towards more networked, environmental and collective perspectives; indeed the exceptionalism of more traditional ‘gifted and talented’ research on and development of individual creativity seems to have become a thread that weaves educational collectives now together. Hatton & Mooney, Snepvangers, Gallagher et al., de Bruin, Mitchell, and Harris all address creative ecologies, and taken together, their chapters offer a diversifying range of scholarship on this important evolution.

Christine Hatton and Mary Mooney (AUS) consider schools as creative ecologies in which creative partnerships play a central role, here drawing on a primary and secondary school artist-in-schools case study. Kim Snepvangers (AUS) argues from a visual art and design education professional experience model that organised ‘creative encounters’ with external mentors advances understanding of how contemporary creative ecologies can be conceived as a self-organisational partnership in a university academic context. Kathleen Gallagher, Nancy Cardwell and Dirk J. Rodricks (CAN) beautifully weave the notion of creative ecology with an ‘ecology of care’ and the affective and intimate labour required. Leon de Bruin (AUS) links creative ecologies with organisational change across teacher education and in-service teacher professional development. Donna Mathewson Mitchell (AUS), while not using the language of ‘creative ecologies’ also looks to creative partnerships and ‘contact zones’ as spaces where creative work happens, not unlike the others here who are more directly theorising creative ecologies or ecosystems. Mitchell explores this through making links between higher education, cultural organisations and schools. Harris extends her well-established scholarship on creative ecologies (Harris 2016; 2017) in schools by examining her *Creative Agency* research lab which seeks to build transdisciplinary creative community across sectors. There are some theoretical synergies as well: both Harris and Chappell extend Anna Craft’s stewardship and wise creativity by thinking with posthuman and new materialist theory to consider ways in which creativity education must move beyond human-centred and atomised notions of change.

Chapters that address policy or policy-related themes feature large here as well. Pat Thomson, Rebecca Coles and Madeline Hallewell (UK) offer

a comprehensive overview of policy movements in the UK through a review of the pivotal 11-year Creative Partnerships programme there. Their chapter links arts engagement with creative development in schools, here specifically through a review of Creative Partnerships' extensive evidence-based publications, across education but also national arts funding policy. Victoria Kinsella (UK) also looks at creative education policy in UK, while Jonathan Purdy, Vinesh Chandra and Kelli McGraw (AUS) explore the rise of mandatory creativity skills as a policy requirement and as a tertiary graduate attribute in Australian higher education contexts, pointing out the disparity between what is taught and what is required, or what others sometimes call the distance between policy and practice.

While for organisational clarity we have differentiated between policy, partnerships and practice, these chapters reflect how, in real world terms, these areas of focus and labour continually and productively overlap (as they must). Thomson's policy chapter, as noted, is grounded in foundational creative partnerships work in the UK. While Harris is mainly extending the creative ecologies conceptual work, the implications for policy change are explicit throughout. Snepvangers articulates the concept of 'practice encounters' (Snepvangers and Mathewson-Mitchell 2018) anticipating co-joined occurrences in alternative digital educational spaces and assets.

Practice is of course integral to education theory, policy and curriculum, and our 'practice'-focused chapters are representative of the most pressing contemporary issues surrounding creativity education. Both Rachael Jacobs and Sue Davis address teaching and assessing creativity in higher education in the Australian context. Shelley Hannigan and Katherine Barrand (AUS) use a/r/t/ography and problematisation to interrogate their own practices as creative teacher-educators and artists. Sarah Asquith, Xu Wang, and Anna Abraham (UK) interrogate creative engagement with the arts in education, including disposition, cognition and environmental and motivation factors.

Howkins (2009) provides a succinct view of emerging conceptions of policy, partnership and practice as a holistic system, noting that "A *creative ecology* is a niche where diverse individuals express themselves in a systematic and adaptive way, using ideas to produce new ideas" (Howkins 2009, p. 11). Howkins is interested in networks and environmental

sensibilities noting that “attempts to use ecology to illuminate creativity have hardly begun, beyond using it as a fancy word for context” (ibid, p. 2). The primacy of relationships in the design of tangible and intangible partnerships, collaborations and connectedness furnishes emergent “conceptual openness” (Marttila 2018, p. 577) in the creative economy. We hope you enjoy the book and its range of perspectives and theoretics on contemporary creativity education, and find wide application for it in your own classes and scholarship.

References

- Blumenfeld-Jones, D. S. (2016). *Teacher Education for the 21st Century: Creativity, Aesthetics and Ethics in Preparing Teachers for Our Future*. Charlotte: Information Age Publishing.
- Craft, A. (2013). Childhood, Possibility Thinking and Wise, Humanising Educational Futures. *International Journal of Educational Research*, 61, 126–134.
- Craft, A., Gardner, H., & Claxton, G. (2007). *Creativity, Wisdom and Trusteeship: Exploring the Role of Education*. Thousand Oaks: SAGE.
- Harris, A. (2016). *Creativity and Education*. London/New York: Palgrave Macmillan.
- Harris, A. (2017). Creative Ecologies: Fostering Creativity in Secondary Schools (Final Report). Available at: <https://www.creativeresearchhub.com/reports>
- Howkins, J. (2009). *Creative Ecologies: Where Thinking Is a Proper Job*. St Lucia: The University of Queensland Press, Brisbane.
- Marttila, T. (2018). Neoliberalism, the Knowledge-Based Economy and the Entrepreneur as Metaphor. In D. Cahill, M. Cooper, M. Konings, & D. Primrose (Eds.), *The SAGE Handbook of Neoliberalism*. Thousand Oaks: Sage.
- McIntosh, P., & Warren, D. (2013). *Creativity in the Classroom: Case Studies in Using the Arts in Teaching and Learning in Higher Education*. Bristol: Intellect.
- Snepvangers, K., & Mathewson-Mitchell, D. (2018). Transforming Dialogues Through Ecologies of Practice in Art, Education and the Cultural Sphere. Chapter One. In K. Snepvangers & D. Mathewson-Mitchell (Eds.), *Beyond Community Engagement: Transforming Dialogues in Art, Education and the Cultural Sphere* (pp. 1–22). Champaign: Common Ground Publishing/University of Illinois.

Part I

Policy



2

What Did Creative Partnerships Achieve?: A Review of the Creative Partnerships (CP) Research Archive

Pat Thomson, Rebecca Coles, and Madeline Hallewell

Around the world, there are increasing calls for better ‘evidence’ about the benefits of arts engagement. National and local governments are developing measurement rubrics and practices which seek to categorise, monitor and evaluate the benefits of cultural participation. For example, the Australian local government association’s Cultural Development Network proposes that cultural participation: stimulates creativity; enriches aesthetic experiences; produces new knowledge, insights and ideas; develops an appreciation of cultural diversity; and enhances a sense of belonging to a shared heritage. These ‘outcomes’ can be measured and used for instance to make judgements about what might be funded,

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exhibited, collected and conserved (<http://www.culturaldevelopment.net.au/outcomes/outcomes-for-cultural-activities-in-the-civic-policy-domain/>). These developments are subject to considerable critique for being reductive and instrumental (Belfiore 2002; Belfiore and Bennett 2007; Gilmore et al. 2017) and for denigrating everyday cultural participation in favour of institutionalised arts practices (Miles and Gibson 2016; Miller and McHoul 1998). But, as government funding for the arts becomes more and more contested, arts advocates find themselves increasingly drawn to the very same instrumental arguments, increasingly on the lookout for ‘evidence’ that can be used to defend and justify continued investment in the arts (Belfiore 2012).

These trends can also be seen in education. Arts educators and policy-makers alike seek evidence that creative pedagogies and arts education improve academic attainment across the board, develop employment-related skills and enhance school experiences. The evidence base is mixed. Debates about ‘the Mozart effect’ – increased academic attainment through engagement with music (see the critical review by Waterhouse 2006) – epitomise the unsettled arts ‘evidence’ terrain. Claims that there is insufficient and also poor research (Hetland and Winner 2004; Winner and Stephan 2013) sit alongside claims for ‘soft skills’ gains including motivation and overall educational engagement (Harland et al. 2000) and transferable academic outcomes (Caterall 2012; Martin et al. 2013).

The Educational Endowment Foundation (EEF) in England funded a highly critical ‘evidence-based-practice’ review of arts outcomes research literature (See and Kotkotsaki 2016) which concluded that:

No high quality single studies were found. It is therefore difficult to state conclusively what the evidence of impact of arts activities in education might be. However, given that a large number of weak or medium quality studies do suggest positive effects more work in this area, taking into account the most promising avenues, would be justified. (p. 3)

In this context, it is hardly surprising that the EEF has recently funded five randomised controlled trials of arts programmes which seek to remedy the evidence gap by, for instance, establishing whether working with

professional writers improves literacy (see <https://www.thersa.org/global-assets/pdfs/reports/rsa-learning-about-culture-report.pdf>). What is perhaps more surprising is that, at no stage in its critical review or its funding programme development, did the EEF consider as ‘evidence’ any of the research commissioned by Creative Partnerships (CP), a fact that did not go unnoticed by England’s arts communities. The online newsletter Arts Professional bluntly headlined the announcement of the EEF programme “£2.5m cultural learning fund overlooks key research” (www.artsprofessional.co.uk 19/01/2017). The omission was surprising for two reasons. First of all, the CP research archive is publicly available and could easily have been interrogated. Secondly, the influence of CP has extended beyond England, and its primary focus – the provision of artists as catalysts for school and curriculum change – has been significant in many other locations. However, the EEF was not apparently concerned with learning from CP. This chapter reports a review of ‘key research’ commissioned by Creative Partnerships (1). We begin by providing some details about CP, next outline the methodology of the review and then report key results.

Creative Partnerships and Its Research Commitments

From 2002–2011 CP funded creative practitioners to work with teachers and schools. The most ambitious, biggest and longest running arts education intervention in the world, CP aimed to transform students’ experiences of schooling, expand teachers’ classroom approaches and dramatically improve the ways in which schools functioned and performed. Its focus was on ‘creative learning’ and whole school change.

In its lifetime, Creative Partnerships worked intensively with over 5000 schools across England, 90,000 teachers and over 1 million young people. It touched 1 in 4 schools in the country, from nurseries and Pupil Referral Units to sixth form colleges. It supported 54 national schools of creativity, and some 1500 change schools, all of which exhibited exemplary creative learning practices. Over 6500 national arts and creativity

organisations were involved in CP. 70% of the funding went to support creative practitioners, primarily artists, with some designers, architects, journalists, and others who could loosely be described as creative industries practitioners.

Unlike many educational reform initiatives, CP took research and evaluation very seriously. CP's commissioned research was designed to provide 'evidence' of impact, but also to inform the development of the programme through theory building and the provision of heuristics for teacher and school learning. For example, Thomson directed a three year project on creative school change (Thomson et al. 2009), and the results were used to inform a reorganisation of the programme. As a model of evidence informed reform, CP's approach to research is of potential use to future arts and creativity initiatives.

CP commissioned 12 literature reviews on topics ranging from discourses of creativity to definitions of the creative industries. It commissioned ongoing research projects designed to inform the national and regional CP organisation, the teaching profession, arts sector and the scholarly community. All schools receiving funding were expected to operate through an inquiry approach, and every project was evaluated. In 2007 CP adopted a national evaluation framework and all schools were required to submit annual plans and summative reports of their activities, investigations and findings. While there were summary reports made of each year's activity, there was little attempt within the programme to bring together research project reports other than as short and separate public summaries and headline findings on the website. A post-programme book (Parker 2013) brings together the key research that continues to inform the international work of CP's parent organisation, Creativity, Culture and Education (CCE).

Our project aimed to interrogate the CP archive to ascertain what it might have to offer contemporary debates about cultural value where the need to move from narrow instrumental purposes to a more holistic view. As well, we aimed to assess the body of evidence of arts engagement afforded by CP. As CP commissioned a wide range of research from social research companies and university researchers who used a range of different methodologies, we also expected to show how CP aligned research methods with research purposes.

Reviewing the CP Archive

The first stage of the project was to map out the materials that were publicly available on two websites¹:

1. the Creative Partnerships website (www.creative-partnerships.com) now a static site on which there are no stored materials and
2. Creativity, Culture and Education (www.creativitycultureeducation.org) the site used by the charity which continues the work of CP in a range of international locations.

At the time, the CCE online archive of research reports contained 146 documents. Many of these were either produced or commissioned by CP. These include: eleven programme summary documents with exemplars; a series of twelve literature reviews; and 46 research reports. These reports used either one or a combination of statistical, survey-based, case study and qualitative methodologies. They explored or evaluated CP practice in relation to various dimensions: student attainment, behaviour and attendance; parental engagement and community resilience; learning and creative learning; teachers, creative practitioners and pedagogy; school ethos, wellbeing and processes of school change; and the creative economy (see Appendix for complete list of texts examined).

The other 82 texts, which had been added to the archive but were not CP or CCE commissioned or published documents, were academic papers, think-tank reports, political manifestos, or policy documents. They addressed a wide range of issues: civic or social inclusion; family; voice, agency and wellbeing; pedagogy and teaching; cognition; creativity as an educational priority; the analysis of education policy; CP as a reform initiative; regeneration; work in the cultural or creative sectors; and the cultural or creative industries.

All documents were tagged by CCE to make them searchable via a limited number of key words. We used these tags but also sorted the papers by type and by date of publication. We were thus able to place the research in the context of changes in the programme's organisation. The second stage of the project was to critically analyse the public commissioned texts. In a first pass through the data two of the research team closely read

and analysed each of the CP commissioned documents asking the following questions:

1. how is the value of the CP offer understood?
2. what benefits is the CP offer said to produce and how is this defined?
3. what methods are used to investigate this benefit?
4. what evidence is produced?

Our data was produced as textual extracts and then coded and thematised using NVivo. A separate second stage of analysis, using the same processes of close reading, coding and thematising, was undertaken for key categories: wellbeing, student voice, teachers' learning and school change, and vocational and work-related learning. We also examined the research methods used across the programme, looking not only for what was done, but also what was not.

Our review was something beyond a narrative review – it lacked the much-critiqued value-laden hierarchy of evidence based reviews and had the same intent as what are sometimes called 'state of the art reviews' – in that we sought not to find out what worked, but to look for more complex explanations and potential lines for further investigation (Grant and Booth 2009).

The remainder of this chapter reports on this analysis.

Creative Partnerships Claims for Impact

CP claimed a number of outcomes from its cultural offer. These were both at the level of the individual and the school. In this section, we discuss some broad claims that were made for the programme through the research and CP documents. CP activities:

1. improved attendance

Case studies of schools invariably noted improved attendance. At a macro level this was borne out over time and across the whole programme. The biggest improvements appear to have been in primary schools involved in the programme for several years (Durbin et al.

2010): The CP document *Changing young lives* (Creativity Culture and Education 2012) provides graphs which show primary school attendance improvement over a five year period.

2. increased motivation and application

Case studies and ethnographies clearly show that teachers believed students to be generally more enthusiastic and engaged in learning when creative approaches were taken.

3. improved learning

This was perhaps the most difficult area for CP and the one where they wanted most to demonstrate change. Annual research by NFER shows modest, but statistically significant, improvements at all key stages across all schools (Parker 2013, pp. 82–83). However some individual schools claimed significant changes in learning – the National Schools of Creativity in particular often demonstrated impressive learning improvements (e.g. Faultley et al. 2011; Thomson and Clifton 2013).

4. strengthened ‘soft skills’

Research reports suggest that the vast majority of schools claimed significant benefits for children and young people in terms of ‘soft skills’ associated with citizenship, well-being and employment – a sense of efficacy and agency; ability to work together as a team, collaborate, cooperate, negotiate and make decisions; ability to have ideas and carry them through; capacity to express themselves and to communicate with a wider range of people using different genres and media; learning greater respect for and appreciation of others; having a greater sense of personal satisfaction and happiness. We unpack these ‘soft skills’ in more detail in the next section.

5. supported schools to develop better relations with parents and the community

Many of the case studies claimed that CP produced better relations with parents and the wider community. Schools had more to offer audiences, more to communicate via newsletters and mainstream media. Some schools saw this as part of their cultural offer to the community, but this was often combined with marketing designed to increase enrolments and reputation (Thomson et al. 2009).

6. made schools ‘better places’.

Researchers report that schools were overwhelmingly positive about the benefits of CP, even if its bureaucratic processes at times frustrated them. Almost without fail, researchers noted, schools reported that: they were happier, livelier, more positive places; the general working and material environment was better; teacher morale was higher; and they had a sense of freedom to innovate and take some initiative in relation to their programmes which they had missed. This is a positive expression of the ‘cultural value’ of CP as seen by school staffs.

The Narrative Review of CP Research Expanded

Through our coding exercise, we identified five areas for which a number of research projects claimed a CP ‘effect’. These were:

- A. Creative learning
- B. Teacher development
- C. Wellbeing
- D. Work-related skills/ Vocational training (WRS/ VT)
- E. Youth ‘voice’

We address each of these in turn, discussing the definitions, processes and the specific contribution that CP made.

Creative Learning

Learning was variously described in the research as either procedural – process, approach, method and a “habit” – or as an objective entity to be measured – attainment, achievement, gaining skills and knowledge. Learning was linked to motivation and engagement: it was said to occur when learners took an interest. Learning was described as contextually defined, dialogic and holistic. It was a product of both intelligence and behaviour.

Creative learning had some distinguishing features. It shared with learning more generally the duality of being both process and product. However, it was variously described in the literatures as for example – being flexible, being an agent of change, and a journey. It had a strong connection with Enlightenment ideals of progress and personal development, overlaid with critical pedagogy notions of empowerment. Qualities such as the capacity to have ideas, generate possibilities, find solutions to problems, taken risks, balance skills with challenge and the capacity to meta-learn were regularly mentioned.

CP generated a considerable amount of material about creative learning including its evaluative framework (reproduced in the appendix in Parker 2013) and the Tyneside region's wheel of creativity' (see Fig. 2.1) intended to support classroom planning and assessment. Both the evaluative framework and the creativity wheel are examples of the ways in which CP drew on research and practice in order to produce a 'tool' that introduced new ways of thinking and talking about creativity and learning outcomes, as well as the kind of evidence that schools might generate. Creative learning was also defined by what it is not – it is “not paperwork” (Sefton-Green 2011) and not repetitive formulaic lessons (Thomson et al. 2010a). It was also “complex, opaque, problematic to measure” (Sefton-Green 2011); nevertheless, at the end of the programme a rubric to measure creative learning was developed (Spencer et al. 2012).

How Creative Learning Was Produced

CP literatures suggest eight processes through which learning outcomes were achieved; CP:

- brought new resources into the school; it offered new opportunities and experiences to teachers and students through new technologies and different art forms and media.
- developed a new position of Creative Agent (a school-based adviser) who acted as a catalyst and champion for change and introduced 'signature pedagogies'.
- supported improvement to school capacities by making changes to physical spaces, focusing on learning, and strengthening human capabilities.



Fig. 2.1 The creativity wheel (Redmond n.d.) – creative learning is broken down into observable/measurable/plan-able aspects

Specifically, CP:

- focused on teacher development to build new learning-focused networks, skills, knowledges and practices.
- advocated curriculum reform, or a shift in pedagogic approach to a more creative approach which involved cross-school and/or cross-curricular work, often based on real-life issues and concerns.

- encouraged schools to engage parents and the community through capitalising on the students' positive experiences and enthusiasm to bring parents into schools, and also making tempting offers for parents to engage in their own learning opportunities.
- 'gave permission' to schools to embrace creativity and creative approaches to teaching and learning, by urging a change in school ethos.
- gave students more say in their learning, creating a more personalised learning experience in part through championing youth voice and student involvement.

Across the research, what seemed to be most significant about CP's cultural offer were the intensity and length of creative involvement that was possible (it was not short term projects). Sustainability, appropriateness and consistency of CP research and outcomes is evidenced through the complex mix of shared and compelling vision for schooling, support for teachers' professional work and judgement, advocacy of student involvement and ownership within arts-based pedagogies.

Teacher Development

Lamont et al. (2010) argued that CP produced personal, interpersonal and leadership, teaching and learning and career impacts: these constituted teacher development. Other researchers concur with this spread of outcomes, but add that CP was designed to produce permanent changes in teachers through a "paradigm shift" in their attitudes towards creativity in teaching and learning. This required individual capacity building (i.e. developing skills) as well institutional changes in school ethos, pedagogy and curriculum. Encouraging teacher creativity was also related to affective outcomes, such as job satisfaction, self-confidence and motivation. According to CP researchers, teacher development within CP was more than just professional development in and of itself – it involved fundamental changes in the institution and the individual teachers within it.

How Teacher Development Was Produced

There were seven key processes through which CP contributed to teacher development. CP:

- gave teachers resources for learning new skills, ideas, techniques and contacts.
- motivated teachers to adopt the creative approaches through giving them – and not just their students – real experiences of creative approaches in action.
- provided new teaching and learning opportunities, created new practices and encouraged teachers to explore new ideas.
- provided time and space for teachers to explore creativity and to plan its integration into their pedagogical approach
- was able to build teachers' creative pedagogical repertoires
- urged changes to the school ethos by creating a focus on sharing resources and ideas, and embedding a positive disposition towards creativity in teaching and learning.
- encouraged and enabled whole school activities, allowing staff to collaborate and share.

CP funded some research focused specifically on teacher learning. Galton (2010) argued that there were three 'types' of teacher learning – (1) when teachers took the skills on offer from the artists and were then able to use them themselves in much the same way; (2) when teachers took the skills on offer and were able to transfer them to other similar topics and (3) when teachers were able to understand the pedagogic principles on offer and use these as the basis for developing new practice. This latter possibility (3) was much less common than the other two types of teacher learning. One programme which did 'transform' teachers was the RSC Learning Performance Network where key teachers were engaged in a long-term programme which supported both practice and academic development (Neelands 2009; Thomson et al. 2010b).

Across the research more generally what seemed to be significant were the long term trusting and mutually rewarding relationships that creative agents and artists established with teachers and school leaders. Teachers

‘bought into’ the programme because CP was ‘on their side’ and was not there to judge and evaluate. Many teachers re-found their sense of professionalism and valued the opportunity to participate in professional learning communities within and beyond their schools. Teachers enjoyed the challenge of horizon broadening, and time to explore and take risks in their own practice. The change framework that CP used and its personalised pacing of change allowed teachers to learn what they needed and wanted with a strong sense of ownership.

Teacher learning was however also very dependent on the overall processes of school change and leadership practice (Thomson et al. 2009). Across the programme, there was a great deal of variety in teacher learning opportunities. This difference was of concern to CP and the programme was reorganised in the mid 2000s into three tiers of school involvement, with National Schools of Creativity being ‘lighthouse’ examples of change and teacher/student learning.

Wellbeing

Wellbeing is a broad term, used loosely and in multiple ways, incorporating the physical and social aspect of life as well as culturally loaded notions such as ‘happiness’ (Nevill and Ni Ogain 2009). Some CP researchers were either working with, or discussed the merits and/ or faults of definitions of wellbeing already in use (for instance the Department of Health’s definition, the Every Child Matters definition or Unicef’s report card). These discussions generally highlighted the importance of development of the self, positive affect and relationships, prosperity and general good health.

Researchers who specifically investigated wellbeing (e.g. McLellan et al. 2012) worked with dual foci; (1) “objective” wellbeing determined by observable and measurable economic and material factors such as crime and epidemiological indicators; and (2) a broader category of “subjective” wellbeing, less tangible (but nevertheless important) aspects of wellbeing such as spirituality, feeling happy or feeling connected to people. Researchers generated subcategories for subjective wellbeing including: cognitive, personal, social, physical and emotional development;

active and playful learning; broadened horizons; communication; creative development; and motivation.

Wellbeing was attributed to project-based processes related to CP specific activities, and school based processes which impacted on teaching and learning.

Project Based Processes

- CP broadened the horizons of students by providing access to new experiences and opportunities
- CP projects created a “buzz” by providing enjoyable experiences tapping into students’ innate curiosity and creativity.
- CP projects produced tangible outputs which could be displayed publicly.

Pedagogical Processes

- CP introduced or supported a shift to a more “creative pedagogy” which afforded choice, focused on creative development, was multi-sensory and improved the quality of relationships.
- CP often took a whole school approach, initiating a community of learning and nurturing a caring, sharing ethos.
- CP support for staff afforded improvements to their wellbeing while developing aspects of their pedagogical repertoires which focused on the wellbeing of students
- CP facilitated or encouraged partnerships with outsiders to meet particular needs (for example, speech and language therapy, recreation and leisure activities).

Researchers argued that CP offered a particularly appealing practice which was not only artistic but also ‘other’ to everyday school; the offer was of high quality, and operated with high levels of acceptance, nurture, care and inclusion as the norm. CP’s open-ness to suggestion, criticisms and new directions was integral to the ways in which school structures

and practices – group work, self-managed and flexible paced projects, a pleasing working environment, a whole curriculum approach – were addressed. CP not only created tangible outputs which were a cause for celebration of effort and achievement, but which were also the basis for memorable experiences.

Wellbeing was strongly connected to school ethos and research that focused on ethos emphasised the structural and organisational cultural components necessary for wellbeing (Bragg and Manchester 2011).

Work-Related and Vocational Learning

CP saw as an important outcome the creation of ‘21st century work-related’ habits and practices. Researchers, like CP itself, often referred to young people building an understanding of ‘the world of work’ and developing the attributes of creative people, i.e. collaboration with others, generation of new ideas, improvisation and risk taking. Some students were also expected to develop talents appropriate to vocations in the creative industries. There was thus in many of the research projects a focus on the acquisition of ‘hard’ and ‘soft’ skills. The ‘hard skills’ included a range of creative practice – not just in the arts but also engineering, architecture, design – and ‘craft’ making practices. Many researchers also generated evidence related to generic and transferable skills such as literacy and numeracy, communication, teamwork, ingenuity and entrepreneurialism.

The research shows that CP supported both ‘internal’ processes, those which were based within and centred on the school and its activities, and ‘external’ processes, those that involved outside agencies from industry and government.

Internal Processes

- CP itself offered events, opportunities and training outside of school.
- CP supported changes in school ethos to encourage ‘outward facing-ness’.

- CP supported activities designed to equip learners to collaborate and co construct, mentor each other, and become entrepreneurial.
- CP strongly encouraged the involvement of young people in decisions, discussions and organisation.
- CP championed and modelled constructivist learning, dialogue and ‘learning by doing’

External Processes

- CP connected young people with creative industries to give real world experiences through apprenticeships, mentoring and networking.
- CP encouraged schools to develop creative approaches to work-related and vocational learning.

CP brought professional artists and creative practitioners into schools and this benefited not only the students, but also the staff. Researchers highlighted the effects of these connections to work-related individual development. The research contains ample evidence of the ways in which creative learning supported young people to be adaptable and flexible, to innovate and transfer what they had learnt to new situations, and to learn how to learn. Cultural experiences funded by CP broadened young people’s horizons and their sense of possibilities.

CP advocated an ‘all through’ vocational and work-related creative approach which started in the early years and was maintained throughout the entire school experience. The legacy research project on levels of creative learning (Spencer et al. 2012) embeds the notion of ‘progress’ for a cluster of work-related creative learning outcomes.

Youth Voice

CP saw as one of its goals the education of ‘a reflective individual and engaged citizen’. It required schools to engage ‘youth voice’ as an integral component for both. Researchers saw this as a somewhat slippery notion.

We use the term 'youth voice' as an umbrella term for a diverse range of work with and by young people, variously also referred to as pupil, student or learner voice, youth consultation, participation, involvement, engagement, empowerment, and so on. (Bragg et al. 2009, p. 7)

Across the research texts, youth 'voice' was considered: (1) literally, through speaking and being spoken to, and/or (2) symbolically, through students having their opinions and interests taken into account and generally being involved in projects.

Researchers used and referred to CP having normative criteria for voice;

- In order for students to have voice, they need to be equipped with the skills, understandings and confidence to 'have their say'.
- In order to be reflective, students needed the capacity to understand their own position or opinion, to consider it in light of the position and opinions of others and have the skills and confidence to be able to voice these positions and opinions.
- Young people were also to be aware of global and local cultural issues, to understand them and also actively participate in communities in order for their advancement and development.

These practices were seen as citizenship and equated to youth voice, as well as the 'reflective individual' and 'engaged citizen'.

Researchers produced evidence that CP contributed to empowerment, understanding of one's own identity, the ability to collaborate and the development of skills and personal attributes; these were considered aspects of a reflective individual. CP also facilitated taking action, having an awareness and understanding of global issues, understanding one's own beliefs and accepting and using broad democratic social norms; these were integral to being and becoming an engaged citizen.

Within the literature there were a significant number of references to CP processes which could be thought of as contributing to the production of a reflective individual as well as that of an engaged citizen. These were:

- Adult facilitation of youth voice, ranging from creating opportunities for participation to modelling and structuring interactions.
- Demands for collaboration and involvement of students in governance of the school, in designing and managing projects and in teaching and learning issues and planning.
- Development and use of different forms and media for expression and communication
- Changes to school ethos and structure to develop and nurture relationships and enable participation
- Student self-expression via new and extended opportunities to communicate ideas and opinions as well as the development of “creative student councils”.

Processes related to the production of an engaged citizen were:

- Producing tangible outputs to exploit the communicative potential of the arts e.g. film
- Broadening students’ outlook/horizons by introducing a diversity of views and experiences as well as enabling engagement in controversial issues.
- Facilitating or encouraging community links, enabling action in projects of benefit to the community, and having positive interactions with community members.

CP’s unequivocal advocacy of young people’s views and opinions was one of its more confronting aspects yet, according to researchers, was highly valued by teachers and schools. CP supported staff to engage in what were sometimes challenging conversations and urged them to take students’ views into account in any reform they undertook. CP commissioned research shows that students were highly encouraged by opportunities to give an opinion, design and manage activities and to become involved in ongoing governance. They welcomed adult support.

CP saw youth voice as integral to education for citizenship and in particular encouraged the centrality of dialogue and recognition of diverse identities and cultural practices. There was tangible support for respectful and responsive peer-to-peer communication. The research corpus offers

case studies of students reflecting on and critiquing ideas, engaging with controversial issues and undertaking outreach work in the community.

However, researchers were sometimes concerned that: (1) consultations asked questions about how learning should take place, rather than also about what knowledges were important, (2) children involved in decision-making processes tended to be those most well socialised into the ways of the school, and (3) that student actions rarely strayed outside of educational contexts into broader social, economic and political questions (e.g. Bragg et al. 2009; Thomson et al. 2009). The links with citizenship were thus highly framed by the concerns of the overall programme.

Programmatic Lessons from CP Research

If CP could be said to have achieved impact and ‘cultural value’ there were also some things that it might have done to accomplish even more.

Researchers made some constructive critiques of the CP offer. More could have been achieved, they suggested, if CP had:

- directly addressed poverty and pedagogy, thus connecting with the body of research about ‘turnaround’ practices. This might also have led to a sharper focus on evaluating the value of more ‘compensatory’ mainstream cultural experiences such as going to the theatre, museums etc.
- connected contemporary reforms with the histories of curriculum change, particularly in regard to project based and cross-curriculum learning and middle schooling
- focused more strongly on assessment practices to assist teachers to document students’ learning
- directed regions to work more consistently with local higher education providers to update teachers’ discipline-specific pedagogical knowledge
- worked with school leadership professional development providers to spread understandings of the commitments and organisational practices of specifically ‘instructional’ school leaders.

Our Conclusions About CP ‘Evidence’

Interrogating the CP archive showed that, over time, CP’s understanding of how evidence and impact should be understood moved away from simple demonstrations of effects. One of CP’s final research reports, aiming to develop a framework for assessing the development of creativity, for example, did so through “field trials” and was oriented to helping teachers and pupils improve their practice (Spencer et al. 2012). CP’s final summary document argues that evidence is about “understanding how and why the Creative Partnerships approach is effective” (Creative Partnerships 2012, p. 13). This task, it argues, requires the description-of and reflection-on practice, attendance to impact and thought at a theoretical level, all working together. CP research, taken as a body, the text suggests, has “provided a theoretical framework which is able to predict the likely impacts of the programme, and these impacts have been confirmed through detailed classroom observation” (p. 21). This is a final definition of evidence which privileges an orientation to impact yet which argues that impact is shown through the interaction of theoretical development and in depth research.

It is not surprising given these three aims that CP commissioned research that used a range of different methods. These included in-depth case study research, mixed methods, surveys, economic modelling, and longitudinal secondary data analysis of school performance. Mixed methods research was generally the norm for impact related studies, while that designed to produce theory and heuristics was more often in-depth case study and ethnographic research. This alignment of research methods with research purposes may well have something to offer cultural value, impact and evidence research more generally.

The review of the archive also revealed two other learning points for similar reform programmes:

1. *Research design overlaps*

Our analysis revealed an issue in the foci of much of the CP commissioned research. What some studies suggested as a ‘causal’ process leading to a particular outcome, other studies claimed as an

outcome. For example, student leadership was said to contribute to well-being; but a sense of safety and security (some of the characteristics of subjective wellbeing) was also said to contribute to student leadership. Teacher professional development was said to be necessary for students to have a say, but students having a say also added to teachers' professional development.

The interlocking nature of these research findings suggests something much more like an ecological process of change in which it is almost impossible to separate out one set of processes and outcomes from another. And indeed, this was the view taken by a number of schools. In the few school evaluations that we were able to look at, the schools claimed multiple benefits from the same project. Creative 'signature pedagogies' produced multiple benefits, which included teacher learning, school culture change, new organisational practices and changed student behaviours (Thomson et al. 2009).

2. *Lessons for research on value and impact*

In retrospect, we can see that the potential for focusing on the arts rather than creativity was not realised. Because CP's emphasis was always on creativity, specific arts learning outcomes were rarely foregrounded. This means, we suspect, that many of the benefits of the programme have not been recorded. These might include:

- more understanding of, enthusiasm for, and participation in arts activities in everyday life
- enhanced access of 'non-traditional' arts groups to institutions and practices i.e. greater cultural capital spread more evenly around the youth population
- enhanced take-up of further education and training in the creative industries.

There could still be research of current 'creative industry' students in FE and HE to ascertain whether any, or how many of them, had some engagement with CP and what impact it had on them. This could be part of a more general large-scale research study into pathways into the

creative industries – research which is urgently needed if we are to better understand this trajectory.

In hindsight, it seems clear that CP – and the wider community of interest – might have benefited from a longitudinal study of students and teachers which tracked them over time through their involvement with the programme. It is certainly the case that there would have been some young people who experienced CP interventions throughout the length of the programme, in both their primary and secondary schools, and we might have learnt more about the ‘impact’ of the programme through this kind of research. We might have seen, as noted above, whether/how CP contributed to increased retention into the senior years and/or different choices about future education and training. NFER did attempt something like this at the beginning of their impact research, but their method relied on schools collecting information which became impossible to maintain. Similarly, it would have been helpful to have a longitudinal study of teachers to see how CP changed their repertoires of practice over time, or not.

CP is not alone in not establishing this kind of longitudinal study; the vast majority of research associated with educational reform programmes uses the school as the unit of analysis, combined with aggregates of existing test and exam results, self-report surveys and some case study work. A notable exception is the A+ arts reform programme which set up a tracking framework which included state testing, but went far beyond this as the key measure of effect (Noblit et al. 2009; Pink and Noblit 2005).

However, the CP archive does affirm considerable gains in a range of areas that are not directly related to performance in standardised tests. Arguably much of what is measured in exams is not comprehensive and thus, a final point that might be learnt from the programme is that more work on aggregating research findings could have been beneficial – and may still be so.

It does seem ironic that this very considerable body of work, both programmatic and research, has been forgotten through a combination of policy amnesia and the quest for ‘what works’ evidence. This is a pity, as there is much to be learnt from the eleven years that Creative Partnerships worked with artists, teachers, young people and schools.

Appendix: CP Research

Summary Documents

- Creative Partnerships. (2007). *This Much We Know: Approach and Impact*. London: Arts Council England, Creative Partnerships.
- Creative Partnerships. (2007). *This Much We Know: Research Digest 2002–2006*. London: Arts Council England, Creative Partnerships.
- Creative Partnerships. (2007). *This Much We Know: School Case Studies*. London: Arts Council England, Creative Partnerships.
- Creative Partnerships. (2007). *Thinkpiece: The Challenge of Defining Impact*. London: Arts Council England, Creative Partnerships.
- Creativity, Culture and Education. (2009). *Creative Partnerships: Changing Young Lives*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2009). *Research Digest: 2006–2009*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2009). *School Case Studies: 2006–2009*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2009). *Thinkpiece: Introducing the Education Charter*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2012). *Creative Partnerships: Changing Young Lives 2012*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2012). *Research Digest: 2006–2012*. Newcastle: Creativity, Culture and Education.
- Creativity, Culture and Education. (2012). *School Case Studies: 2006–2011*. Newcastle: Creativity, Culture and Education.

Literature Reviews

- Banaji, S., Burn, A., & Buckingham, D. (2010), *The Rhetorics of Creativity: A Literature Review*. 2nd ed. London: Creativity, Culture and Education.
- Bragg, S. (2010). *Consulting Young People: A Literature Review*. 2nd ed. Newcastle: Creativity, Culture and Education.

- Fleming, M. (2010). *Arts in Education and Creativity: A Literature Review*. 2nd ed. London: Creativity, Culture and Education.
- Marsh, J. (2010). *Childhood, Culture and Creativity: A Literature Review*. Newcastle: Creativity, Culture and Education.
- McLellan, R., Galton, M., Steward, S., & Page, C. (2012) *The Impact of Creative Initiatives on Wellbeing: A Literature Review*. Newcastle: Creativity, Culture and Education.
- Menter, I. (2010). *Teachers: Formation, Training and Identity: A Literature Review*. Newcastle: Creativity, Culture and Education.
- Oakley, K. (2009). *'Art Works' – Cultural Labour Markets: A Literature Review*. London: Creativity, Culture and Education.
- O'Connor, J. (2010). *The Cultural and Creative Industries: A Literature Review*. 2nd ed. Newcastle: Creativity, Culture and Education.
- Jewitt, C. (2008). *The Visual in Learning and Creativity: A Review of the Literature*. London: Arts Council England, Creative Partnerships.
- Jones, K. (2009). *Culture and Creative Learning: A Literature Review*. Newcastle: Creativity, Culture and Education.
- Spencer, E., Lucas, B., & Claxton, G. (2012). *Progression in Creativity: A Literature Review*. Newcastle: Creativity, Culture and Education.
- Thomson, P. (2010). *Whole School Change: A Literature Review*. 2nd ed. Newcastle: Creativity, Culture and Education.

School Attendance, Behaviour and Attainment

- Cooper, L., Benton, T., & Sharp, C. (2011). *The Impact of Creative Partnerships on Attainment and Attendance in 2008–9 and 2009–10*. Slough: National Foundation for Education Research.
- Durbin, B., Rutt, S., Saltini, F., Sharp, C., Teeman, D., & White, K. (2010). *Impact of Creative Partnerships on Young Peoples' Behaviour and Attainment*. National Foundation for Education Research.
- Eames, A., Benton, T., Sharp, C., & Kendall, L. (2006). *The Longer-Term Impact of Creative Partnerships on the Attainment of Young People*. National Foundation for Education Research.
- Eames, A., Benton, T., Sharp, C., & Kendall, L. (2008). *The Impact of Creative Partnerships on Pupil Behaviour*. National Foundation for Education Research.

Kendall, L., Morrison, J., Yeshanew, T., & Sharp, C. (2008). *The Longer-Term Impact of Creative Partnerships on the Attainment of Young People: Results from 2005 and 2006*. National Foundation for Education Research.

The Economy and Creative Industries

BOP Consulting. (2006). *Study of the Impact of Creative Partnerships on the Cultural and Creative Economy*. London: Creative Partnerships.

Pricewaterhouse Coopers. (2010). *The Costs and Benefits of Creative Partnerships*. Newcastle: Creativity, Culture and Education.

Shorthouse, R. (Ed.). (2010). *Disconnected: Social Mobility and the Creative Industries*. London: Social Market Foundation.

Extremism

Creativity Culture and Education. (2010). *Create/Participate: A Selection of Six Case Studies Working Creatively with Prevent Strategy Objectives*. London: Creativity, Culture and Education.

King, E., Holloway, S., Brown, K., & Sawar, S. (2010). *Evaluation of the CCE Prevent Programme*. Newcastle: Creativity, Culture and Education.

King, E., Holloway, S., Brown, K., & Sawar, S. (2010). *Creativity and Education in the Prevent Agenda: A Review of Policy, Theory and Evidence*. Newcastle: Creativity, Culture and Education.

Family and Supplementary Education

Ipsos MORI. (2009). *Parents' Views on Creative and Cultural Education*. Creativity, Culture and Education.

Lexmond, J., & Wright, S. (2009). "Creativity Is Vital in Shaping Our Futures – Families Are Fundamental in Developing It": *Making of Me*. London: Demos.

Safford, K., & O'Sullivan, O. (2007). *'Their Learning Becomes Your Journey': Parents Respond to Children's Work in Creative Partnerships*. Centre for Literacy in Primary Education.

- Sheikh, S. (2013). *Evaluation of CCE/NCB Arts and Cultural Activities Project with Looked After Children*. Newcastle: Creativity, Culture and Education.
- Sheikh, S., & Sarwar, S. (2012). *Evaluation of Sacred Spaces Programme*. Newcastle: Creativity, Culture and Education.
- Young, S. (2010). *Arts Explorers Pathfinders Evaluation Report*. Leeds: Cape UK.

Learning and Creative Learning

- Caudle, J., & Osborne, L. (2006). *Beach Classrooms*. London: Arts Council England, Creative Partnerships.
- Craft, A., Burnard, P., Grainger, T., & Chappell, K. (2006). *Progression in Creative Learning*. London: Arts Council England, Creative Partnerships.
- Heath, S. B., Paul-Boehncke, E., & Wolf, S. (2005). *Made for Each Other: Creative Sciences and Arts in the Secondary School*. London: Arts Council England, Creative Partnerships.
- Lord, P., Jones, M., Harland, J., Bazalgette, C., Reid, M., Potter, J., & Kinder, K. (2007). *Special Effects: The Distinctiveness of Learning Outcomes in Relation to Moving Image Education Projects*. London: Arts Council England, Creative Partnerships.
- Pollmuller, B., & Sercombe, M. (2007). *Animation in Education: Its Impact on Learning, Literacy and Creativity*. London: Arts Council England, CP.
- Heath, S. B., & Wolf, S. (2004). *Visual Learning in the Community School*. London: Arts Council England, Creative Partnerships.
- Safford, K., & Barrs, M. (2005). *Creativity and Literacy: Many Routes to Meaning. Children's Language and Literacy Learning in Creative Arts Projects*. London: Creative Partnerships.
- Sefton-Green, J. (Ed.). (2008). *Creative Learning*. London: Creative Partnerships.
- Spencer, E., Lucas, B., & Claxton, G. (2012). *Progression in Creativity: Developing New Forms of Assessment – Final Research Report*. Newcastle: Creativity, Culture and Education.
- Tims, C. (Ed.). (2010). *Born Creative*. London: DEMOS.

Schools: Ethos, Wellbeing and Processes of School Change

- Bragg, S., & Manchester, H. (2011). *Creativity, School Ethos and the Creative Partnerships Programme: Final Report of the Project*. The Open University.
- Bragg, S., Manchester, H., & Faulkner, D. (2009). *Youth Voice in the Work of Creative Partnerships*. Newcastle: Creativity, Culture and Education.
- Centrifuge Consulting. (2012). *Evaluation of the Wider Impacts of the Schools of Creativity Programme*. Newcastle: Creativity, Culture and Education.
- David Wood Consultants. (2010). *Creative Partnerships Change Schools Programme Evaluation*. Newcastle: Creativity, Culture and Education.
- David Wood Consultants. (2012). *Creative Partnerships Change Schools Programme Synoptic Evaluation 2011*. Newcastle: Creativity, Culture and Education.
- Fautley, M., Gee, M., Hatcher, R., & Millard, E. (2008). *The Creative Partnerships Curriculum Projects at Kingstone School Barnsley and Queensbridge School Birmingham*. Newcastle: Creativity, Culture and Education.
- McLellan, R., Galton, M., Steward, S., & Page, C. (2012). *The Impact of Creative Partnerships on the Wellbeing of Children and Young People*. Newcastle: Creativity, Culture and Education.
- Pringle, E., & Harland, J. (2008). *Creative Partnerships: An Audit of Practice*. London: Arts Council England, Creative Partnerships.
- Sharp, C., Pye, D., Blackmore, J., Brown, E., Eames, A., Easton, C., Filmer-Sankey, C., Tabary, A., Whitby, K., Wilson, R., & Benton, T. (2006). *National Evaluation of Creative Partnerships 2002–2004*. London: Arts Council England, Creative Partnerships.
- Thomson, P., Jones, K., & Hall, C. (2009) *Creative School Change*. Newcastle: Creativity, Culture and Education.
- Wood, D., Hole, J., Payne, R., Whitehead, P., Winters, M., & Muschamp, P. (2008). *Creative Partnerships; National External Evaluation Audit Report*. Newcastle: Creativity, Culture and Education.

Teachers, Creative Practitioners and Pedagogy

- Downing, D., Lord, P., Jones, M., Martin, K., & Springate, I. (2007). *Study of Creative Partnerships Local Sharing of Practice and Learning*. Slough: National Foundation for Education Research.
- ERS. (2011). *Evaluation of Well Versed*. Newcastle: Creativity, Culture and Education.
- Galton, M. (2006). *The Pedagogy of Creative Practitioners in Schools: Final Report*. London: Arts Council England, Creative Partnerships.
- Ipsos MORI. (2009). *Teachers Omnibus for Creativity, Culture and Education*. Creativity, Culture and Education.
- Lamont, E., Jeffes, J., & Lord, P. (2010). *Evaluation of the Nature and Impact of the Creative Partnerships Programme on the Teaching Workforce*. Slough: National Foundation for Education Research.
- Mackey, T., & Ullman, A. (2006). *Creative Partnerships: Survey of Headteachers*. London: Arts Council England, Creative Partnerships.
- Sefton-Green, J. (2011). *Creative Agents: A Review and Research Project*. Newcastle: Creativity, Culture and Education.
- SQW. (2010). *Mapping Training and Development Provision for Early Years Practitioners*. Newcastle: Creativity, Culture and Education.
- Thomson, P., Hall, C., Jones, K., & Sefton-Green, J. (2012). *The Signature Pedagogies Project: Final Report*. Newcastle: Creativity, Culture and Education.
- Thomson, P., Hall, C., Thomas, D., Jones, K., & Franks, A. (2010). *A Study of the Learning Performance Network, an Education Programme of the Royal Shakespeare Company*. Newcastle: Creativity, Culture and Education.

Note

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References

- Belfiore, E. (2002). Art as a Means of Alleviating Social Exclusion: Does It Really Work? A Critique of Instrumental Cultural Policies and Social Impact Studies in the UK. *International Journal of Cultural Policy*, 8(1), 91–106.
- Belfiore, E. (2012). “Defensive Instrumentalism” and the Legacy of New Labour’s Cultural Policies. *Cultural Trends*, 21(2), 103–111.
- Belfiore, E., & Bennett, O. (2007). Determinants of Impact: Towards a Better Understanding of Encounters with the Arts. *Cultural Trends*, 16(3), 225–275.
- Bragg, S., & Manchester, H. (2011). *Creativity, School Ethos and the Creative Partnerships Programme*. London: Creativity, Culture and Education.
- Bragg, S., Manchester, H., & Faulkner, D. (2009). *Youth Voice in the Work of Creative Partnerships*. London: Culture Creativity and Education.
- Caterall, J. S. (2012). *The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies* (Research Report# 55). New York: National Endowment for the Arts.
- Creative Partnerships. (2012). *Changing Young Lives*. Newcastle: Creativity, Culture and Education.
- Creativity Culture and Education. (2012). *Changing Young Lives Research Digest 2006–2012*. Newcastle: Creativity, Culture and Education.
- Durbin, B., Butt, S., Saltini, F., Sharp, C., Teeman, D., & White, K. (2010). *The Impact of Creative Partnerships on School Attainment and Attendance*. Slough: National Foundation for Educational Research.
- Faultley, M., Hatcher, R., & Millard, E. (2011). *Remaking the Curriculum. Reengaging Young People in Secondary School*. Stoke on Trent: Trentham.
- Galton, M. (2010). Going with the Flow or Back to Normal? The Impact of Creative Practitioners in Schools and Classrooms. *Cambridge Journal of Education*, 25(4), 355–375.
- Gilmore, A., Glow, H., & Johanson, K. (2017). Accounting for Quality: Arts Evaluation, Public Value and the Case of “Culture Counts”. *Cultural Trends*, 26(4), 282–294.
- Grant, M., & Booth, A. (2009). A Typology of Reviews: An Analysis of 14 Review Types and Associated Methodologies. *Health Information and Libraries Journal*, 26, 91–108.
- Harland, J., Kinder, K., Lord, P., Stott, A., Schagen, I., & Haynes, J. (2000). *Arts Education in Secondary Schools: Effects and Effectiveness*. Slough: NFER.

- Hetland, L., & Winner, E. (2004). Cognitive Transfer from Arts Education to Nonarts Outcomes: Research Evidence and Policy Implications. *Handbook of Research and Policy in Art Education*. In E. Eisner & M. Day (Eds.), *Handbook of Research and Policy in Art Education* (pp. 135–162). New York: Routledge.
- Lamont, E., Jeffes, J., & Lord, P. (2010). *Evaluation of the Nature and Impact of the Creative Partnerships Programme on the Teaching Workforce*. Slough: National Foundation for Educational Research.
- Martin, A. J., Mansour, M., Anderson, M., Gibson, R., Liem, G. A. D., & Sudmalis, D. (2013). The Role of Arts Participation in Students' Academic and Non-Academic Outcomes: A Longitudinal Study of School, Home, and Community Factors. *Journal of Educational Psychology, 105*(3), 709–727.
- McLellan, R., Galton, M., Steward, S., & Page, C. (2012). *The Impact of Creative Partnerships on the Wellbeing of Children and Young People*. Newcastle: Creativity, Culture and Education.
- Miles, A., & Gibson, L. (2016). Everyday Participation and Cultural Value. *Cultural Trends, 25*(3), 151–157.
- Miller, T., & McHoul, A. (1998). *Popular Culture and Everyday Life*. London: Sage.
- Neelands, J. (2009). Acting Together: Ensemble as a Democratic Process in Art and Life. *Research in Drama Education, 14*(2), 173–189.
- Nevill, C., & Ni Ogain, E. (2009). *Feelings Count: Measuring Children's Subjective Well-Being for Charities and Funders*. London: New Philanthropy Capital.
- Noblit, G., Dickson, C. H., Wilson, B. A., & McKinney, M. B. (2009). *Creating and Sustaining Arts-Based School Reform. The A+ Schools Program*. New York: Routledge.
- Parker, D. (2013). *Creative Partnerships in Practice. Developing Creative Learners*. London: Bloomsbury.
- Pink, W., & Noblit, G. (Eds.). (2005). *Cultural Matters. Lessons Learned from Field Studies of Several Leading School Reform Strategies*. Cresskill: Hampton Press.
- Redmond, C. (n.d.). *The Creativity Wheel. Assessing Creative Development*. Teacher Resource. London: Creative Partnerships.
- See, B. H., & Kotkotsaki, D. (2016). *Impact of Arts Education on the Cognitive and Non-Cognitive Outcomes of School-Aged Children. A Review of Evidence*. London: Durham University and Educational Endowment Foundation.
- Sefton-Green, J. (2011). *Creative Agents: A Review and Research Project*. Newcastle: Creativity, Culture and Education.

- Spencer, E., Lucas, B., & Claxton, G. (2012). *Progression in Creativity: Developing New Forms of Assessment*. Culture, Creativity and Education. <http://www.creativitycultureeducation.org/wp-content/uploads/Progression-in-Creativity-Final-Report-April-2012.pdf>. Accessed 12 Sept 2012.
- Thomson, P., & Clifton, J. (2013). Connecting with Parents and Their Community in an Urban Primary School: Creative Partnerships to Build Literacy/ies. In K. Hall, T. Cremin, B. Comber, & L. Moll (Eds.), *International Handbook of Research on Children's Literacy, Learning and Culture* (pp. 54–66). London: Wiley-Blackwell.
- Thomson, P., Jones, K., & Hall, C. (2009). *Creative Whole School Change. Final Report*. London: Creativity, Culture and Education/Arts Council England.
- Thomson, P., Hall, C., & Jones, K. (2010a). Maggie's Day: A Small Scale Analysis of English Education Policy. *Journal of Education Policy*, 25(5), 639–656.
- Thomson, P., Hall, C., Jones, K., & Franks, A. (2010b). *An Investigation of the Learning Performance Network of the Royal Shakespeare Company*. Nottingham. <http://www.artsandcreativityresearch.org.uk/>
- Waterhouse, L. (2006). Multiple Intelligences, the Mozart Effect, and Emotional Intelligence: A Critical Review. *Educational Psychologist*, 41(4), 207–225.
- Winner, E., & Stephan, V. L. (2013). *Educational Research and Innovation Art for Art's Sake? The Impact of Arts Education*. Paris: OECD.



3

Transforming Creative Classroom Contradictions Through Activity Theory Analysis

Victoria Kinsella

Introduction

In the last twenty years in England, education policy initiatives have positioned creativity as a core aspect of knowledge creation. These include the commissioning of the National Advisory Committee on Creative and Cultural Education Report (NACCCE 1999), the identification of creative thinking skills (Qualifications and Curriculum Authority (QCA) 2005) and the development and delivery of the Creative Partnerships programme from 2002 to 2011. Current discourse continues to highlight the importance of creativity in education and the significance of the arts for developing cultural understanding. In the independent review of Cultural Education in England, Henley (2012) recognised that creativity and the arts were a fundamental aspect of young people's education and cultural understanding asserting "...no education can be complete, indeed no program of education can even begin, without making the arts

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and creativity central to a child's life". This support for creativity as an important aspect of children and young people's education was further acknowledged by the governments Department for Culture, Media and Sport response to the Henley Review (DCMS 2012). In this document, a quote from Sophocles emphasised the democratic right of a cultural education, stating: "Whoever neglects the arts when he is young has lost the past and is dead to the future" (ibid, p. 2).

Participating in cultural activities and offering children and young people the opportunity to develop creativity both in school and the wider community is increasingly important in the current climate in England. The Henley review and the DCMS response maintain the importance of the arts and creativity for offering young people vital cultural experiences, as part of a broad and balanced curriculum. However, this is not necessarily the norm in current English classroom practices. Challenges are continually being posed such as the omission of the arts in school timetables and the continued emphasis on performative measures and assessments, all of which can be seen as indicative of discrimination against cultural and creative forms of knowledge.

Dilemmas of Creativity in the English Education Context

Although current policy documents identify creativity and the arts as central elements to learning, this has contrasted significantly with enforced performativity measures in English schools which have impacted the take up of arts subjects (music, art and design, dance and drama) at examination levels for young people aged 14–18. A pertinent example was revealed in November 2010, when the new conservative-liberal coalition government released the Schools White Paper 'The Importance of Teaching' (Department for Education 2010). Within this report the government set out its intentions for the future of the English education system, stating it would reform performance tables and set high expectations. This became the main feature of the government's drive to support the English Baccalaureate (EBacc).

The EBacc features as a measure in school league tables, which quantify whether a learner has secured good General Certificate of Secondary Education (GCSE) passes (examinations taken in all secondary schools in England from the ages of 14–16) grade C and above, in English, Mathematics, the Sciences, a Modern Foreign Language and a Humanities subject such as History or Geography. These specific EBacc subjects were identified as facilitating subjects for future entry into higher education and for employment (Russell International Excellence Group 2011). The exclusion of the arts from these options devalues their position as academic subjects. According to Adams (2013, p. 2) the government’s “philistinism approach of excluding arts education from the EBacc” has had, and will continue to have, negative consequences for the subject in English schools. This was evident in the Cultural Learning Alliance report (2017) which stated a 9% drop in schools uptake of arts GCSE examinations in secondary schools from 2016 to 2017, and a 28% drop from 2010 to 2017. This standardisation and regulation of education has had detrimental effects on the arts and the development of creativity in the classroom. These policy measures send a message to schools, learners, and parents that “creative and cultural education is of little importance in the twenty first century curriculum” (Steers 2010, p. 14). This has created contested classroom spaces where creativity in arts education has been marginalised in secondary schools.

This is not to say that there is not some excellent examples of localised creative teaching, and some excellent art and design teachers whose work should be celebrated. However, this is not necessarily the norm, and orthodoxies of approaches can vary and be the antithesis of creativity (Downing and Watson 2004). Unfortunately, the regime of accountability has coerced art and design teachers into adopting a series of examination-safe procedures that have culminated into reproductive practices, acknowledge by Efland (1976 REF) as the “School Art Style” and similarly noted as “school art” by Hughes (1998). Unless such practices and policies are challenged, they are likely to continue to dominate educational thinking.

The Research

This chapter reports on one aspect of the results from a study in England, which aimed to address the marginalisation of creative knowledge and understanding within the secondary art and design classroom. The action phase of this research was based in four case study schools. The participants included one teacher from each school and one key stage three class, with on average 28 learners. Key stage three in England (KS3) refers to years of schooling normally known as Year 7, Year 8 and Year 9, when pupils are aged between 11 and 14 years old. The teachers' experiences varied from; two heads of department with over 10-year experience, a mid-career and newly qualified teacher. Their art and design backgrounds also varied from theatre design, graphic design to illustration and fine art.

The school contexts were also diverse, in order to try to capture a wider understanding of the differing contexts in which art and design secondary education exists. This included a specialist art status school, two academies, and a faith school. The schools had diverse populations of students and ranged in socio-economic status.

Understanding and Exploring Creative Processes in the Art and Design Classroom

Informed by relevant theories of fostering and developing creativity in the classroom (Craft 2001; Claxton 2002; Jeffery and Woods 2003; Craft et al. 2007; Burnard 2007), the research sought to explore creative teaching and learning practices within the KS3 art and design classroom. Existing literature on creativity in education from a range of phases of schooling; the early years foundation stage (0–5 years old), primary (5–11 years old) and secondary (11–16 years old), highlighted six specific creativity process components; play, exploration, experimentation, risk-taking, critical reflection and analysis (Wallas 1926; Guilford 1967; Sternberg and Lubart 1999; The National Advisory Committee on Creative and Cultural Education 1999; Amabile 1996; Qualifications and Curriculum Authority (QCA) 2007, 2009). These were identified as being integral to creative

pedagogical development. Over a six-week period, one or a combination of the creativity components, became the objective of the lesson. The teachers and learners explored their subjectivity within the classroom as well as how social, cultural and political elements impacted upon creative teaching and learning. Within the lessons, teachers and learners considered methods that developed creative thinking and behaviours, approaches that made learning more interesting and effective, opportunities for imaginative activity as well as the development of new knowledge. This culminated in an exploration of creativities assessment, with a focus on creative process instead of product. The aim being to explore whether the identification of the six specific components of creativity would help teachers and learners recognise creative teaching and learning, in conjunction with attributing creative process as well as product.

The choices of methods for this research were selected on the basis of trying to understand the complexity of the secondary classroom space and account for creative diversity. This included observation of lessons, post lesson reflections and semi-structured interviews with the teachers. For the observations, field notes were taken and then shared via a critical reflection discussion with the teacher after the lesson. Although observations allowed the exploration of behaviours and pedagogical approaches, the post lesson reflections and semi-structured interviews, probed that which could not be observed. Together we “plugged in” (Deleuze and Guattari 1987, p. 4) and critiqued the creative components of play, experimentation, exploration, risk-taking, critical reflection and analysis. This plugging in situated us in a “continuous process of making and unmaking” (Jackson and Mazzei 2013, p. 262) our knowledge and understanding of creativity within KS3, allowing us to disassemble and reassemble the creative classroom narratives.

But What Lens Could Be Applied to Explore Creativity in the Art and Design Classroom?

As this research was concerned with developing and plugging into creative teaching and learning, an analytical tool that investigated the culture of the classroom and its relationship to the formation of mind and action was needed (Engeström 2001). The art and design classroom as a

site of learning is multifaceted and has to account for different identities, intelligences, modes of learning, and pedagogical processes. It is a complex, shared space, with a range of practices, dispositions that frame beliefs, values, and discourses. Activity Theory (AT), which allows the exploration of the socio-cultural-political structures and processes surrounding the classroom, was chosen as a lens. AT is particularly useful as it embraces individuality but also credits interconnections between people, making visible the multidimensional environment of the art and design classroom and the micro and macro perspectives.

Choosing Activity Theory

Vygotsky's (1978) Zone of Proximal Development (ZPD) and Bourdieu's (1984) field theory share a resemblance with AT. They have a similar interest in learning and the progressive development of social practices. The notion of the social self is key, this is described by Bakhurst as:

...the idea that individuals are essentially social beings; that the very nature and possibility of our minds depends in some deep sense on our community, or on our participation in culture. (Bakhurst 2009, p. 197)

The investigation into individual learning, which is mediated by cultural artefacts (both physical and of the mind) and membership of a group within a wider community, began through the work of Vygotsky. Vygotsky, established a triangular model of action, which explored the idea of human behaviour and mediation (Engeström and Miettinen 1999). The model explores the process through which "human behaviour is mediated by artefacts, which prompt action" (Bakhurst 2009, p. 199). These can be either physical or psychological artefacts that facilitate action such as, tangible artist tools like paintbrushes and cameras, or less obviously in forms such as language, via questioning and discussion (Burnard 2007). These artefacts become the stimulus between the individual and an outcome which could be a painting or an idea formulated from discussion (Fautley and Savage 2007, p. 45) (Fig. 3.1).

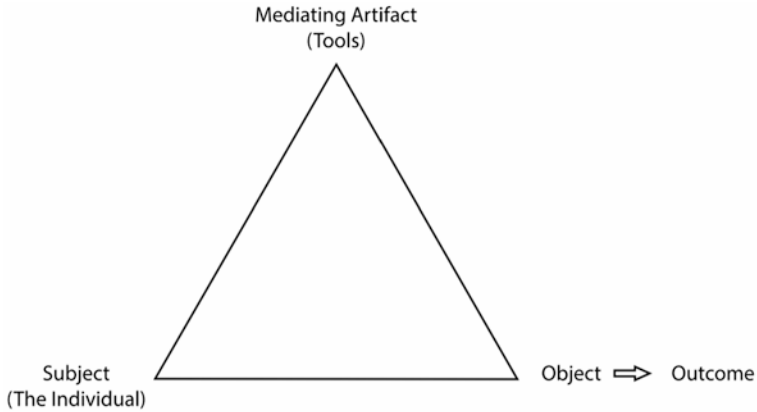


Fig. 3.1 Vygotsky's model of action (1978, p. 40)

Although Engeström sees the study of artefacts as an important aspect to human functioning (Engeström 1999) he argues that the focus of mediation should be on its wider relationships to other aspects of an activity. This was important for this research, as the context of the classroom includes wider cultural and political positions. Engeström therefore looked at the process of activity further and developed an activity system that allowed both individual learning processes and social interaction to be viewed simultaneously.

Figure 3.2 represents Engeström's model of activity which has an additional layer to Vygotsky's model which places an activity within a social context. In the upper part of figure, Engeström presents a Vygotskian conception that the 'object' of an action by (or on) a 'subject' is culturally 'mediated' by some form of 'artefact'. This model is extended in the lower part the figure, to encompass both individual and group actions in a collective, interactive activity system in which 'rules', a sense of 'community' and 'division of labour' are evidenced. By opening up the model to explorations of the social and cultural, we could "better understand what is being done and how" (Burnard and Younker 2008, p. 63). This is similar to Bourdieu and Wacquant's (1992) notion of practice being situated within a field, where meaning is not independent form the social, historical and cultural milieu but is a:

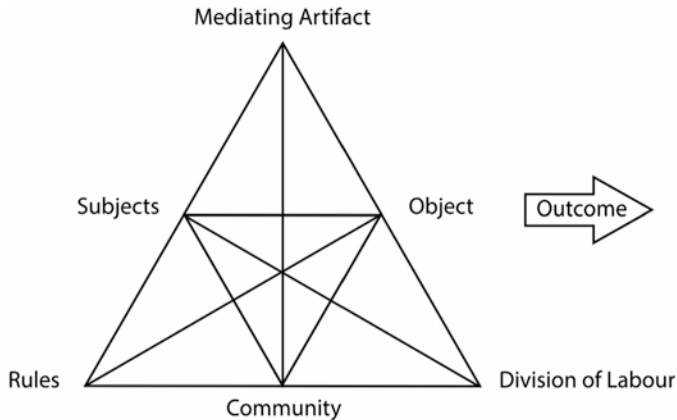


Fig. 3.2 Engeström's structure of human activity system (2001, p. 136)

Configuration of relations between positions objectively defined, in their existence and in the determinations they impose upon the occupants, agents or institutions. (ibid, 1992, pp. 72–73)

Moreover, Engeström highlighted that activity systems take shape and are transformed over lengthy periods of time, suggesting a concept of 'historicity' (p. 7). An art and design teacher therefore needs to consider the learners' and their own educational histories, and the effects these have on actions in the classroom. In order to understand this further, I shall explore some of the key components of the activity system, their interconnections and relation to art and design classroom practice.

Deciphering the Activity Theory System: The Subject

Teachers and learners are pedagogised within educational practices and discourses. Central to these parameters is the acknowledgement of the cultural-historical character of subjectivity. Although the social world of the classroom plays a critical role in the formation of identity, the subject is still an individual (Gonzalez Rey 2002). Being aware of the factors that

have an impact on teacher and learner subjectivity assists the illumination of the culture of the classroom. Factors associated with the self, including socio-cultural norms and values, are influenced by individual and collective histories, and power relations. Therefore, both the subject's previous experiences, and the socio-cultural field in which this is situated binds the activity system.

The Rules, Community and Divisions of Labour

In Engeström's activity theory diagram, the socio-cultural aspect of activity is conceptualised through associations between rules, division of labour and community. Both rules and division labour determine the character of the relationships created within the activity system. These can either positively or negatively affect the creation of a community.

Jackson et al. (1993) defines rules as the dos and don'ts of the classroom, providing the teacher with guidelines for activity. The classroom operates under specific rules, which shapes activity (Burnard 2007, p. 45). These rules are not just teacher directed but externally determined by the English National Curriculum NC, education and school policy, performative and assessment regimes. Schimmel (1997) argues that school rules can damage good teaching where rules become restrictive, authoritarian, formally distributed and legalistic. Exchanges within the activity system play a crucial role in its development. Factors such as hierarchical roles and power distribution impact activity. Power relations are also inherent in classroom situations but are exemplified further in classrooms today due to status attributed to the rules of the classroom such as the performative and assessment regimes. This can often lead to practices which are teacher dominated, instead of collaborative approaches where both teacher and learner knowledge is conjoined.

Dissecting the rules and divisions of labour within the AT system can facilitate explorations into the community. At the heart of a successful and creative learning community is the concept that human activity is not the action of the individual human mind alone, but groups of minds interacting with one another. Reflection on the rules, divisions of labour and community posits learning and teaching from a perspective of ques-

tioning and challenging, where dominant forms of practice and beliefs that control practice are critiqued (Shor 1992). It is through exploring each of the differing facets of the AT system that the exploration of the object of activity can be explored. This can lead to changes in practice, adaptations in pedagogical approaches and reconfiguration towards more creative outcomes.

The Use of Activity Theory for Identifying Contradictions Within the Art and Design Classroom

An important feature of AT is its suitability for examining and analysing individual and collective art and design pedagogic practices. By looking at each component of the activity system, exploring their interconnections and relations, the teachers and I, examined, reflected, questioned and plugged into notions and practices of creativity in the art and design classroom. Critically, it helped us think with theory and depict core contradictions present within the system. These contradictions were characteristics that disrupted creative teaching and learning.

Contradictions are present in every activity system and help to indicate emergent opportunity for development in practice. However, as activity within the art and design classroom was historically accumulated, contradictions became embedded in teacher and learner practice and remained unchanged. It was important within this research to begin to uncover these contradictions and explore the tensions that were affecting creative teaching and learning. We needed to question, challenge and reflect in and on them. Engeström (2001) classified this as a process of “aggravation” (p. 136), where existing norms and conditions are probed in order to develop a new collaborative viewpoints. This interrogation through thinking with theory was also as Jackson and Mazzei (2013, p. 263) state “positioned our project as a production of knowledge that might emerge as a creation out chaos”.

Within this research there were many aspects causing disruptions and contradictions, which affected the creative nature of the activity system. The complexity of the multifaceted interactions within the classroom

meant that pedagogy and identity were uncertain. The analysis of the teacher's responses therefore began with us engaging in explorations of their personal narratives and classroom cultures. To explore the teacher's creative practice, we engaged in critical conversations and reflections together, with the aim of re-connecting artistic histories and classroom experiences. It was hoped that by doing so, the teachers might be able to begin to re-imagine creativity within the classroom. The AT system structured these reflections through considering the relationship between the subject (the teacher and the learner) and object (creative teaching and learning). Through this joint process and analytical exploration of their responses, three core contradictions were illuminated: identity, the rules of the classroom and the object of learning as the product.

Identity Contradictions

The first of these contradictions regarded the teachers' own personalised perspectives of their identity as both teachers and artists. The duality of these positions caused tensions within the classroom, affecting their outlook on secondary art and design education, curriculum development and practice. For two of the teachers, their identity was characterised as both teacher and artist. Although their teacher identity was more present within the classroom, they both recognised the concept of the artist as being central to their pedagogic practices. The discourses and characteristics of being an artist remained strong within the transition into the classroom. One of them noted:

I feel like my artist practice is my teaching practice.

On the other hand, the other two teachers both grieved their artist identities. They described forced limitations via cultural and measurable school expectations as mechanistic devices which downplayed their artist identities. Their identities were characterised by philosophies of being a teacher, which restrained their previous experiences of being an artist. In the interviews with them they both noted their frustrations:

I feel cheated. I spent my time going home shading spheres and colouring in the colour wheel, thinking gosh, that's what you have got to do.

You don't get a chance to do your own artwork, due to time constraints and workload.

Rule Contradictions

Although the teachers perceived their identities as either teachers or artist-teachers school cultural expectations and rules shaped practice within the classroom. All the teachers accepted the norms set out through their schools performativity and accountability cultures, curriculum documents and education policies. They adapted their personal notions of creativity in order to fit into these rules, where a performative pedagogic discourse underpinned pedagogic practice. The teachers acknowledged that failure to perform successfully according to these rules could have profound negative consequences on their professional status and inter-linked with this, learner success, one of the teachers discussed this:

We are under a lot of pressure to get results. We only see the pupils every two weeks in key stage three so this is tough. I think because of that there is the tendency to just stick to things you know that work and get results.

Schimmel (1997) argues that school and classroom rules damage good teaching through restrictive and authoritarian modes. Often they are not developed with the learners, but distributed in formal and legalistic modes which define learner and teacher behaviours. Because of these factors, the teachers resented the rules and their implication on creative practice within the classroom:

I always have in the back of my mind that there is teaching art and there is teaching to the exam. I don't think the things are mutually exclusive. At the back of my mind, although I try to teach creatively and teach creative independence, there is a point where I contradict myself and say to pupils you do this like this and this is how you do it.

Object as Product Contradictions

Because of the rule focused activity, teaching and learning was prescribed and rigidly set against standards. The development and exploration of creative classroom rhetoric was redundant from classroom practice. Classroom activity ignored the creative process, focusing instead on products and outcomes.

The teachers and learners became fearful of activity which diverged from these practices, especially creative practices that sought to disrupt and encourage risk-taking. They continually questioned practice as noted by one of the teacher's:

You get tied into what they (the learners) are meant to have achieved by the end of the week and that's in the back of your head. And you think should I try this? Should I try that?

The products of learning therefore became the basis for judgement of both teacher and learner achievements, often in formalised and ritualised forms such as assessment of final outcomes most often via school art approaches such as drawing and painting.

Transforming the Creative Contradictions

It was evident that the teachers' pedagogical practices, beliefs, theories, epistemologies, practices and agency were all being threatened by these contradictions. The only way that they could be changed was through aggravation, where we probed existing norms and conditions. As the teachers' contradictions were historically accumulating they would not be easily investigated. Pedagogy had been conditioned into ritualistic behaviours which were structured and sequential. They had negated their creative practice and personal philosophies and because of this, the teachers had no knowledge of the lack of creativity and the dominance of performativity and assessment within their classrooms. The first step in order to aggravate the AT system, was to engage and explore the historicity of the classroom and its impact on identity and the socio-cultural outlook.

Aggravating Identity

As it is the teachers who plan activity, they needed to contest their implicit knowledge and understanding. This was stimulated by the mediating tool, the six creativity components, which began to change dialogue in the classroom. The focus on the six creative processes (play, experimentation, exploration, risk-taking, critical reflection and analysis) encouraged reflection on pedagogy and outcomes of learning. The creativity components became a means through which meaningful dialogue and analysis occurred, alongside discursive reflection.

In order for the teachers to develop creative teaching approaches they needed to interrogate their sense of self and reaffirm creativity as a central component. This began with the teachers aggravating the self and challenging their conceptions of teaching within the art and design classroom. Through discussing their histories during post lesson reflections and interviews the teachers uncovered their perceptions of teaching, reasons for entering the teaching profession and how experience shaped philosophy. Through talking, critiquing and aggravating these notions the teachers began to re-consider their narratives in light of their teaching practices:

It is important to re-engage with creativity and creative processes, so that they are considered in equal measure to the outcomes.

Discussions surrounding the creativity components provided the means through which the teachers could begin to navigate and investigate new creative pedagogies and stimulate creative knowledge:

It was really good to identify or just be aware of the fact of when creative teaching and learning is taking place. Breaking it down into play, experimentation, exploration, risk-taking, critical reflection and analysis was useful and allowed me to think not only about learning but the ways in which I teach. I think that's what could be lost within teaching.

Aggravating the Rules

A main factor contributing to teacher pedagogical disruption was the change in power as the subject. Through considering notions of power and its implications to divisions of labour and the community within the AT system, the teachers gave learners a greater role in the learning process. The new division of labour from teacher-led controls, to more collaborative approaches, created a mutual meaning-making classroom. For the teachers, this also included an attitudinal transformation where school cultural agents, including policy and school management, became less of a focus for achievement with creative learning processes becoming the focus. One teacher called this “closing the door on performative factors”.

This is not to say that the teachers did not consider school policy, just that performance and assessment measures were no longer the focus of activity. Through this, shifts occurred in the types of interactions within the classroom.

Aggravating Outcomes Through the Exploration of the Creative Process

Prior to the research, the objects of activity for all of the teachers were outcome based. The teachers needed to renegotiate objectives leading to formal assessments. The idea of “rebalancing pedagogy”, by Burnard and White (2008, p. 676), suggests that teachers need to navigate and be supported through opposing demands between the contradictions of performativity and creativity. However, to challenge contradictions, teachers needed to develop confidence to transform their own practice and that of their learners. Through exploration of what a creative outcome looks like, the teachers redefined their own notions of creative exploration leading to a creative outcome. Some findings across the three art and design teachers included:

- accepting that the process is as important as an outcome,
- to be less prescriptive on the outcome allowing learners to make decisions even if it means failure;
- to re-evaluate the classroom space and set up environments for collaboration and critical reflection between the community of the classroom
- to be a creative teacher by modelling the creativity components through creative teaching approaches.

The Potential Space of the Creative Classroom

AT was adopted so that attention could be paid to the systems of activity that occurred in the classroom, which either supported and nourished creative practice or restricted it. It became a vital analytical process, highlighting contradictions that needed aggravation. As the contradictions were historically accumulative, they were not easy to probe. Power had a profound effect on the experience of teachers where their identity, in conjunction with the identity of their learners, were put to question. A consequence of a marketised approach to education via performative and accountability regimes was the construction of identity dominated by boundaries (Atkinson 2003). To explore creative teaching and learning processes, the teachers needed to develop the confidence to question these contradictions, be willing to take risks and reflect on practice. Through the exploration of creative teaching and learning the outcome of an activity was reconceptualised and the classroom became a space of creative potential.

I use the word potential here to signify that, although AT allowed the participant teachers to reconsider, diffract and dissect the classroom, they were not always able to be creative in their practice. Importantly though, through AT, they were poised to considered key elements of a creative classroom in a sustainable way. Through analysis of each teacher's response the research found that they were more aware of socially distributed knowledge, socio-cultural structures surrounding the classroom and its impact on the construction of a creative community. They were also more about to think with theory, enabling them to "shake out of the compla-

gency of seeing/hearing/thinking as they always have, or might have, or will have” (Jackson and Mazzei 2013, p. 269). Finally there is a temporal element as becoming and transforming practice towards more creative approaches requires ongoing and continual analysis.

Activity Theory as a Transformational Lens

As discussed in the opening of this chapter, the current status of arts education in England and creative teacher and learner practice are in a state of flux. I hope that throughout this chapter you will have come to understand the complexity of the multifaceted interactions within the art and design classroom and the impact they have on pedagogic practices and identity construction. This however is not only systemic for art and design, but many teachers working within a wide range of jurisdictions and levels of education.

For each individual teacher engaged in this research the process of change via the AT system created moments of unease, practical and emotional dilemmas and disquiet. This caused a sense of chaos at the local level. I classify this as chaos to emphasise the discomfort and turmoil that this sort of plugging in can cause. One teacher explained how working with the creativity components was “difficult at times as I also had to take risks and sometimes it didn’t work”. However, through reflection, challenge and criticality the teachers recognised the contradictions posed within the classroom and the chaotic effect on both their own and the learners’ creative behaviour and thinking. Transformation could not occur until the teachers were made aware of creativity contradictions and ways of working with these dilemmas of practice were uncovered. The teachers had to engage and explore their implicit and explicit understandings as well as their educational values. Chaos is therefore a process of re-negotiation, which resulted, for these teachers and learners in a less restrained classroom space and the development of newly conceived creative teaching and learning approaches. This work provided significant individual and classroom transformational change against the backdrop of ongoing funding cuts and government devaluing of creative arts education subjects in the UK.

I hope that this chapter will not only speak to those working within the arts in schools but beyond into informal educational settings and practices, in whatever jurisdiction creative activity is taking place. What this research shows is that thinking with and through practice with an analytical tool like AT, acknowledges and allows us to critique knowledge production, that by “plugging in” (Deleuze and Guattari 1987, p. 4) to the process of analysis, habitual practices can be aggravated.

References

- Adams, J. (2013). The English Baccalaureate: A New Philistinism? *International Journal of Art & Design Education*, 32(1), 2–5.
- Amabile, T. M. (1996). *Creativity in Context*. Boulder: Westview Press.
- Atkinson, D. (2003). Forming Teaching Identities in Initial Teacher Education. In N. Addison & L. Burgess (Eds.), *Issues in Art and Design Teaching*. London/New York: Routledge Falmer.
- Bakhurst, D. (2009). Reflections on Activity Theory. *Educational Review*, 61(2), 197–210.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgment of Taste*. London: Routledge.
- Bourdieu, P., & Wacquant, L. (1992). *Réponses*. Paris: Seui.
- Burnard, P. (2007). Reframing Creativity and Technology: Promoting Pedagogic Change in Music Education. *Journal of Music, Technology and Education*, 1(1), 37–55.
- Burnard, P., & White, J. (2008). Creativity and Performativity: Counterpoints in British and Australian Education. *British Educational Research Journal*, 34(5), 667–682.
- Burnard, P., & Younker, B. A. (2008). Investigating Children’s Musical Interactions Within the Activities Systems of Group Composing and Arranging: An Application of Engeström’s Activity Theory. *International Journal of Educational Research*, 47(1), 60–74.
- Claxton, G. (2002). *Building Learning Power*. Bristol: TLO Ltd.
- Collingwood, R. (1938). *The Principles of Art*. Oxford: Clarendon Press.
- Craft, A. (2001). *An Analysis of Research and Literature on Creativity in Education*. London: Qualifications and Curriculum Authority.
- Craft, A., Cremin, T., Burnard, P., & Chappell, K. (2007). Developing Creative Learning Through Possibility Thinking with children aged 3–7. In A. Craft,

- T. Cremin, & P. Burnard (Eds.), *Creative Learning 3–11 and How We Document It*. Stoke-on-Trent: Trentham.
- Cultural Learning Alliance. (2017). GCSE Results Announced Today See a Continuing Free Fall in Arts Subject Entries. Available at: <https://cultural-learningalliance.org.uk/2017/08/>. Accessed Aug 2017.
- Deleuze, G., & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press.
- Department for Culture, Media and Sport (DfES). (2012). *The Government response to Darren Henley's Review of Cultural Education DfES*.
- Department for Education (DfE). (2010). *The Importance of Teaching: The Schools White Paper*. London: Her Majesty's Stationery Office.
- Downing, D., & Watson, R. (2004). *The Star Project and Initial Teacher Training: An Evaluation*. Slough: National Foundation for Educational Research.
- Engeström, Y. (1999). Activity Theory and Individual and Social Transformation. In Y. Engeström, R. Miettinen, & R. L. Punamäki (Eds.), *Perspectives on Activity Theory* (pp. 19–38). Cambridge: Cambridge University Press.
- Engeström, Y. (2001). Expansive Learning at Work: Toward an Activity Theoretical Reconceptualization. *Journal of Education and Work*, 14(1), 133–156.
- Engeström, Y., & Miettinen, R. (1999). Introduction. In Y. Engeström, R. Miettinen, & R. L. Punamäki (Eds.), *Perspectives on Activity Theory* (pp. 1–16). Cambridge: Cambridge University Press.
- Fautley, M., & Savage, J. (2007). *Creativity in Secondary Education*. Exeter: Learning Matters.
- Gonzalez-Rey, F. L. S. (2002). L.S. Vygotsky and the Question of Personality in the Cultural-Historical Approach. In D. Robbins & A. Stetsenko (Eds.), *Voices Within Vygotsky's Non-Classical Psychology: Past, Present, Future* (pp. 129–142). New York: Nova Science.
- Guilford, J. P. (1967). *The Nature of Human Intelligence*. New York: McGraw-Hill Book Co.
- Henley, D. (2012). *Cultural Education in England*. London: DfES.
- Hughes, A. (1998). Reconceptualising the Art Curriculum. *Journal of art and design education*, 18(1), 41–49.
- Jackson, A., & Mazzei, L. (2013). Plugging One Text into Another: Thinking with Theory in Qualitative Research. *Qualitative Inquiry*, 19(4), 261–271.
- Jackson, P. W., Boostrom, R. E., & Hansen, D. T. (1993). *The Moral Life of Schools*. San Francisco: Jossey-Bass.

- Jeffery, B., & Woods, P. (2003). *The Creative School: A Framework for Success, Quality and Effectiveness*. Abingdon: Routledge Falmer.
- NACCCE. (1999). *All Our Futures: Creativity, Culture and Education*. London: DfEE.
- Qualifications & Curriculum Authority (QCA). (2005). *Creativity: Find It, Promote It! – Promoting Pupils' Creative Thinking and Behaviour Across the Curriculum at Key Stages 1, 2 and 3 – Practical Materials for Schools*. London: QCA.
- Qualifications and Curriculum Authority (QCA). (2007). *The National Curriculum: Statutory Requirements for Key Stage 3 and 4*. London: QCA.
- Qualifications and Curriculum Authority (QCA). (2009). *Big Picture*. London: QCA.
- Russell International Excellence Group. (2011). *Informed Choices: A Russell Group Guide to Making Decisions Post-16 Education*. London: The Russell Group.
- Schimmel, D. (1997). Traditional Rule-Making and the Subversion of Citizenship Education. *Social Education*, 61, 70–74.
- Shor, J. (1992). *Empowering Education*. Chicago: University of Chicago Press.
- Steers, L. (2010). *In response to the White Paper*. National Society for Art and Design Education Website. Accessed Dec 2010.
- Sternberg, R. J., & Lubart, T. I. (1999). The Concept of Creativity: Prospects and Paradigms. In R. J. Sternberg (Ed.), *Handbook of Creativity*. Cambridge: Cambridge University Press.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Wallas, G. (1926). *Art of Thought*. London: Jonathan Cape.



4

Creative Agency / Creative Ecologies

Anne Harris

‘You can lead a horse to water, but you can’t make it drink’ goes the old chestnut. Considerable creativity education and creative industries research these days is stalling somewhere around this challenge of matching up the contemporary thirst for creativity, with action based on the well-documented pools of its evidence in and outside of education. It is not more creativity research we need, perhaps, but a different way of joining up the creative horse and water. My current and most recent research into a kind of creativity that is at once commodified (Harris 2014), agentic (Barad 2007) and networked (Craft 2013; Harris 2016), has led to the

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establishment of Creative Agency, an interdisciplinary and cross-sectoral research lab at RMIT University in Melbourne, Australia.

Creative Agency is an ecosystem of like-minded artists, activists, researchers and citizens who wish to break down the walls of siloed productivity that keep us atomised, alienated, and individual versus communal; it is an intervention into both the neoliberal academy as well as the commodification of the arts, creative and cultural industries more broadly. Creative Agency is an embodiment of what Barad has described as the kind of creative intra-action (“the mutual constitution of entangled agencies,” [Barad 2007, p. 33]) that is an encounter rather than an output of pre-existing individuals, identities, or any other fixed notion of expression and experience. Creative Agency is an emergent assemblage of disjunctive subjectivities and perspectives, events that have drawn diverse actors and *actants* into its web, a kind of research-by-living that responds to the new ‘impact and engagement’ focus of 21st century research culture.

A brief review of arts education and ‘gifted and talented’ education psychology scholarship shows a robust history of creativity in education, in both individual and collective ways. There is ample evidence that creativity is now a ubiquitous economic driver and educational imperative in syllabi, curricula and policy documents, including within Australia as evidenced in the Melbourne Declaration on educational goals for young Australians (MCEETYA 2008), The Australian Curriculum (ACARA 2011), the Australian Quality Framework (AQF) and Australian Institute for Teaching and School Leadership (AITSL) Standards. Indeed, the need for creative change comes directly out of the Australian Government’s *Inquiry into Innovation and Creativity* (Commonwealth of Australia 2017), *Recommendation 10 (2.94)*, which “recommends that the National Innovation and Science Agenda explicitly recognise the importance of STEAM, creative digital skills, the creative industries and the arts more generally” (p. 40), and the Creative Australia National Cultural Policy (2013).

The Australian government recently launched and funded a related innovation agenda identifying creativity as core to the globalising Australian workforce. And while other vision documents such as the Melbourne Declaration state that young people should engage in

curriculum and educational experiences that promote creativity, innovation, and cultural appreciation to become confident and creative learners (MCEETYA 2008), there is still no consistent, robust and nationally-implemented approach to support the development of students' creativity, as I have called for (2016). Many of the recent transdisciplinary frameworks used in Australia such as Quality Teaching in NSW Schools, (NSW DET 2003) and Productive Pedagogies (Queensland Government 2003) failed to address creativity explicitly. This leaves an unproductive gap for educators between policy expectation and classroom teaching, between national and state or local imperatives. As a consequence, many teachers and students lack the pedagogical skills, flexibility, resilience and creativity they need to cope with the escalation of change, and diversity of creativities, a core characteristic of the 21st century (Dikici 2014; Lucas et al. 2013; Gu et al. 2014; Wyn 2009). Yet it also signals a geopolitical divide between British/Australian/Canadian and US approaches to creativity education research: in the United States, creativity in education is strongly driven by education psychology disciplinary perspectives and values, while elsewhere the arts play a much stronger role or are conflated with creativity education (Munday 2016).

Moving beyond individualistically-conceived or pre-determined considerations, codifications, and practices of creativity, arts and design reveals a need for systems and mindset change, rather than just more definitional, assessment and individualist approaches. Across tertiary contexts, designers use coloured post-it notes; arts education scholars have games; many practice-led researchers start with the body and get us moving. But all of these approaches to 'fostering' creativity remain enthralled with the notion that people can be more creative, and that by 'activating' humans, something inherent can somehow be released, identified, measured, and reproduced. But what if, as Karen Barad has claimed, the real work happens in-between, in the agency—creative and otherwise—of the moment, an encounter, an exchange? In this chapter, I urge creativity education scholars and practitioners away from the pursuit of a measurable, standardised creativity, and towards a more personal, more political, and more-than-human, creativity. Drawing on my own experience, and my new research lab at RMIT University, *Creative Agency*, I chart how individual experience must expand into creative ecologies or environments

in which creativity research in education is pursued collectively, politically, and rhizomatically in order to demonstrate the power of the collective uncontained.

I have long advocated the need for a more dialogic relationship between the 'macro' and 'micro' approaches to improving the creative ecosystem of secondary and tertiary education, or what Craft called 'Big C and little c creativity' (2008), and Simonton has called the relationship between the individual and the field (2013). If an increasing number of national economic policies state the centrality of creativity to their regional and national agendas, the 'macro' of creativity education is clearly linked to economic policy and the need for globally-mobile creative workforces. Yet the 'micro' of education policy and curricular approaches continues to fail that goal, at both the individual and collective level. Partly a communication breakdown between the micro and the macro work of creativity education, it is also a failure to take a sufficiently systemic (or ecological) approach that considers school site, the school system and national education-and-economy strategies overall as a whole ecosystem that requires change, not just in the micro contexts of defining, assessing, or teaching a skill. A creative ecology approach to education reform is not just good business, it better prepares the workforce as a network of subjects for both individual and group success (Kacerauskas and Zavadskas 2015; Howkins 2011; Stankeviciene et al. 2011; Gollmitzer and Murray 2008; Hearn et al. 2007), agentically, educationally, and economically.

The ways in which creativity is grounded in the personal, while materialising the conceptual, is demonstrated in this chapter structurally as well as discursively. The structure interweaves some historical scenes that have been pivotal in my own creative development and thinking, with subheadings adapted from a design thinking model in order to structurally represent this movement and intra-action¹ (Barad 2007): Absorb (Vessel); Analyse (Micro); Interpret (Macro); Synthesise (Ecosystem). The chapter moves between 'moments' that serve as illustrations of creative agency, then pulls out to considerations of 'micro/macro' perspectives on creativity and its ecologies, then returns to the notion of creative agency arguing creative communities as a particular form of ecology or ecosystem, much needed and well-suited to education reform. Too often, creativity scholarship argues conceptual or pedagogical points with a

near-absence of creativity in the doing, and in this chapter I seek to foreground the necessity for creative methods in arguing creative change. To this end, I define and explore important component concepts of this creative ecological picture, including macro, micro and agentic creative becoming.

Absorb (Vessel)

When I travel and give talks on creativity, I ask people about the most creative moments from their childhoods, and specifically from school. This question matters because it links the study of creativity first and foremost back to our own experiences and memories, rather than just to a bunch of rubrics, indexes, and curriculum imperatives. In this chapter, I begin the first three sections with three of my own personal moments of artistic and creative emergence, three encounters which are embedded in and representative of environmental factors or whole ecologies that changed as a network in relation to my individual emergence. I use them to demonstrate the interdependent or intra-active relationship between the individual and the ecosystem, not in a pre-existing encounter way, but as an interdependent co-emergence. By starting here, as feminist scholarship reminds us, the personal is always political, and as feminist posthumanist theorist Karen Barad urges us, the personal is not pre-existent but rather co-emerges with the collective, always in cultural and collective context. Creativity too cannot be considered out of its spacio-temporal context.

Creativity in education too often begins with doing. It focuses on the practical side of things, the embodied learning that is inherent to creativity and arts in education. But design thinking begins with a more receptive stage. In some versions of the steps, *empathy* is first, while in other versions *observe* or *identify the problem* is stage one. While these have obvious differences in tone and orientation, they all link the creative and iterative process familiar to arts educators with a more outward-focused listening stage. Empathy is an evocative way to remind problem-finders that there is an emotional and interpersonal aspect to this step, whereas *identify the problem* and the more traditional anthropological *observe* can

leave the doer in an objectifying stance that de-contextualises any subject or problem to be 'solved' or observed. In this chapter I use the verb-noun combination *Absorb/Vessel* for my first stage to highlight the value of listening, receiving, and noticing, with an emphasis on holding. I choose not to use the design thinking stage of *empathy* in intercultural research contexts, because this too risks culturally imperialist assumptions about understanding the 'other'.

Moment #1 I grew up and attended school in a small town in upstate New York, about three hours out of New York City. That's important for two reasons: it was a small country school, so there was freedom and individuality, but it was close enough to benefit from New York City's cultural riches on school excursions and family holidays. These were two extremely different cultural contexts, but close enough to be mutually-informing. I graduated secondary school in three years rather than four, I was senior class president, and I graduated with almost a full year's worth of university credit due to a programme called 'Advanced Placement' available to senior secondary students. And I wasn't a brilliant student. Why was I able to do all this, in a shorter time than most of my peers? Because the system was flexible, and catered to students' individuality. I belonged to a programme called 'Gifted and Talented', which has been a controversial programme over the years, seen as elitist like all 'streaming' programmes are. The programme didn't necessarily give those of us in the programme better teachers, or different curriculum, but it did give us freedom. In the context of that high school, the 'problem' for kids like me was boredom, and the school's response was not to increase programming but to give us space to develop the things we were already intrinsically motivated towards. Because I was an 'arty' kid, I was able to go to the auditorium and the choir room. I wrote a musical and produced it, scoring it for six instruments. A group of students and I produced it as a second musical that year. I took extra music theory instruction from the music teacher when she was free and I was allowed to sit and play the grand piano for hours on end. But the sports-minded kids were allowed to go to the sporting area and advance themselves in their chosen field of endeavour too, with or without mentorship.

The most creative experiences I had in high school were found in these gaps of freedom: to get one-on-one musical tuition from a gifted music teacher (who by the way did that in her free time); to be alone in a dark auditorium playing and composing music on the kind of grand piano my family could never afford; to get other kids out of class to practise our musical and to paint the sets. We were supported in that work, and it nurtured my creativity and self-motivation. It moved me from being a kid who was easily bored, was more curious than most, and had some natural arts-based talents, to a member of a tightly-knit creative ecosystem in which we all played a unique role, who drew on each others' similarities and differences, who made the most of our individual gifts for the benefit of the group. It gave us the joy of belonging, while also seeing 'real-world' outputs from our labours. In short, it gave us creative agency within our school's ecosystem to make decisions for ourselves.

Why is such a formative experience relevant to a creative ecologies theoretic? For a more nuanced entry into creativity as an entanglement of events, environments and collectivities, I turn to Karen Barad. Barad's philosophy of agential realism (2007) avoids reinscribing the current materialist/discursive dichotomy, instead joining them in a mutually-beneficial and emergent process of intra-action. She says that neither material phenomena nor discursive practices are "ontologically or epistemologically prior. Neither can be explained in terms of the other...matter and meaning are mutually articulated" (Barad 2007, p. 152). One does not exist before or outside of the other. Barad's articulation of intra-action is different from *interaction* because interaction presumes the pre-existence of things that then come into contact. In intra-action there is no pre-existence, only the encounter, the entanglement. For Barad, agency bears a close relationship to intra-action because in agential realism, agency is neither limited to humans, nor is it simply expanded to include nonhumans, but instead Barad enjoys exploring the continuum along which human and non-human are but two creative co-constitutive emergences.

Scholars continue to conceptualise creativity in education as a thing to be done, to be measured, to be fostered. What if we move from a humanist creativity (a creativity which must be *had* by humans, *done* to humans), to a posthumanist approach in which the role of humans is really ancillary,

mainly there to help facilitate the space of possibilities for creativity (which might be considered as/in agency)? Sort of like a caterer sets the space for a great party, or a gifted director like Peter Brook makes the ‘empty space’ for a performance to emerge. Creativity as playful encounter, one of the central purposes of my Creative Agency lab in Melbourne. A creativity like Barad’s notion of agency which “is not something that someone or something *has* to varying degrees, since I am trying to displace the very notion of independently existing individuals” (Barad 2012, p. 55). A body of creativity research in recent times has been doing just this—trying to help us move away from creativity as a characteristic, a trait, even a skill, and more towards creativity as encounter. How do we foster unpredictable creative possibilities, encounters, environments, in education contexts which pivot on the predictable?

Barad’s notion of agency or agentic realism urges us away from trying to see an event as the encounter between pre-existing entities, and rather an emergent event that has no past and no future but only exists in the moment, a notion that shares much with what some performance and creativity scholars have talked about as improvisation (Sawyer 2011) or flow (Csikszentmihalyi 1996). In describing agential realism, Barad says “intra-actions to begin with are never determining, even when apparatuses are reinforcing. Intra-actions entail exclusions, and exclusions foreclose determinism. However, once determinism is foreclosed this does not leave us with the option of free will” (Barad in Dolphijn and van der Tuin 2012, p. 55). That is, if we began to think in education about creativity as the emergent, the encounter, or what Anna Craft called the “trusteeship of ideas” (Craft et al. 2007, p. 28), creativity can be celebrated for its resistant qualities, its refusal to be harnessed, its resilient attachment to new ideas.

If we can entertain the possibility that “Agency is not held, it is not a property of persons or things; rather, agency is an enactment, a matter of possibilities for reconfiguring entanglements. So agency is not about choice in any liberal humanist sense” (Barad in Dolphijn and van der Tuin 2012, p. 55), but more about creating conditions for something to arise, then creativity becomes the ‘aha!’ moment itself, not something to be measured but something that breaks beyond measurement of the known.

Anna Craft urged us to think about creativity and its potential “to act as a negative rather than a purely positive force, with what appears to be a life of its own, one which encourages innovation for innovation’s sake and without reference to genuine need” (Craft et al. 2007, p. 28). Her work on wise creativity, and creative stewardship, remind us that creativity is central to human (and more-than-human) experience in ways that go far beyond the current love affair with creativity-and-innovation as market drivers. She (and others, including Torrance 1987) advocates for a *common-good* perspective on creativity that goes beyond a Pac-man mentality of producing and consuming for pleasure or profit. For Craft, creativity must always stay tied to collectivist concerns including environmental sustainability, a view that shares more with cultural industries, up-cycling, or sharing economies, than it might with a narrower ‘creative industries’ approach.

In a creative ecological theoretic, the macro and the micro aspects of collectivist and educational creativities are friends—they work together, they rely on one other—but they are not the same thing. By better networking creativity education as just one (but crucial) component of a whole sociocultural ecosystem, it becomes less frightening to take productive risks in an education system that no longer needs to (or can) stand alone (Harris 2016, 2017). In that new, more fluid world, creative individuals are only catalysts for whole-system change.

Analyse (Micro)

Moment # 2 I won a scholarship from the Young Playwrights’ Festival to study playwriting and screenwriting at New York University, an elite American university which at the time was one of the three most expensive schools in the country, a school I could never have attended without the financial assistance. Our teachers included some of the most famous playwrights and screenwriters in the country, and there was general consensus that you can’t teach someone to be a great writer, but you can teach them the rules of the form and validate it as a lifestyle, a practice, a way of being. Then it’s up to them: they have to write. And then it’s up to the fates: they have talent or they don’t. And then it’s up to culture, timing, a

host of uncontrollable factors. I believe the same thing is true about compulsory schooling: as teachers, we can't teach students to be creative, or even academic, but we can teach them the rules and structures of a range of creative forms, confirm the value of creativity, and make the creative environments for them to try.

Micro Conditions

The 'micro' considerations in the story above point to the value of making creative learning environments available to all students, and the often-classed nature of these kinds of opportunities. Educators can and do have an obligation to make better conditions for creativity, and that within those conditions, structures, and lifestyles, more creativity will happen. All people have not only the right to enjoy themselves through creative work, but now as a leading workforce requirement, there is no longer a conflict between what 'feels good' in doing creative artmaking, versus what is 'sensible' in terms of workforce skills and training; today, they are one and the same. So what's the problem? Formal education at each level of the educational system hasn't caught up. We are stuck in a STEM vortex, a schizophrenic hall of mirrors in which the only 'legitimate' creative and innovative endeavour is creative science, creative digital technology and design, creative English or engineering, and creative mathematics including coding. Notice the side-step there? It says 'okay we are going to acknowledge the economic value of creativity if we *have* to, but not creative arts. Only creativity linked to entrepreneurship and workplace innovation counts.' And so the arts/science divide is unnecessarily re-entrenched, and creativity is commodified (Harris 2014).

My experience as a young person in an elite playwriting degree learning from 'the best' theatre makers in my country taught me valuable (micro) lessons not only about the links between creativity and arts as co-emergent, but between the individual and the ecology in which the individual emerges. Creative processes and environments are always collective, and insisting on individualism of compulsory and tertiary learning contexts is antithetical to nurturing creative endeavour, one contributor perhaps to the current difficulty with 'measuring' creativity in education.

Arts and design processes are well-documented as catalysts for pedagogical and social transformation in classrooms as well as in the community more generally (Shin and Jang 2017; Ewing 2015, 2011; Ewing and Gibson 2015), but seldom have creative processes been allowed to change the education system itself. Globally, recognition of the contribution that creative arts processes can make to STEM, expanding it from an acronym of subject siloes to a symbol for more transdisciplinary approaches has been growing for more than a decade (Van Harpen and Sriraman 2013; Creative Australia 2013; Cho et al. 2011; Ambrose 2005). As identified by the British Educational Research Association Research Commission, the Warwick Commission (2015), and Welsh (2015), Korean (2015) and Australian (2017) national education and workforce vision reports, a move towards STEAM (science, technology, engineering, arts and mathematics) education as differently configured transdisciplinary practices that offer a new way of thinking and doing education, is now urgently required. Yet this increased policy focus has not been translated into sustained practice in compulsory and tertiary education (and even at times in arts faculties more broadly), even when the rising STEM agenda makes a STEAM approach a plausible way for these compatible but distinct agendas to come together (Harris and de Bruin 2017).

This critique responds directly to previous recommendations for clearer and more broadly-agreed methods of assessment of creativity in teacher education courses (see Bentley and Savage 2017). McWilliam et al. (2008) found that further research is needed “to engage academic teachers with creativity as a hard-edged professional capacity that can and should be fostered through higher education teaching and assessment” (p. 4), especially in Science education. This approach also serves to frame and support the need for increased government funded focus on teaching quality from a more transdisciplinary approach (Noh and Huh 2015; Tan 2014; Wright et al. 2013; Sawyer 2011; Reilly et al. 2011; Ferrari et al. 2009). Such widespread research findings support the need in both national and global contexts and ecologies for a more focused, networked, and *meta* approach to improving creativity in global education and workforce training, a goal which has a decidedly neoliberal sounding agenda. Yet the *meta* project of nurturing sustainable and economically effective education and workplace productivity is not so different from fostering

personal satisfaction, meaningful work, and growing a holistic sense of purpose and agency as human (and more-than-human) networks of beings.

Interpret (Macro)

Moment # 3 I taught secondary school in Australia in two places: at a Catholic school in Alice Springs for 5 years, and at a Catholic girls' school in Melbourne for 6. I have always been glad I didn't start teaching in a city, because I was shocked when I eventually did at how regulated and surveilled my work as a teacher was. I couldn't improvise, couldn't spontaneously take the kids off campus, couldn't change the curriculum, or on a hot Friday if things weren't working, put them in a van and drive them out bush to film the beautiful landscape around us. Working in the country suited me because it was improvisation based in necessity: with rich natural resources but few academic ones, when a passionate teacher came along, the school just about bent over backwards to let us do what we wanted. It made me more creative as a teacher, and the trust they had in me helped me trust myself. In my eleven years as a high school teacher, my students in the less-structured environment of that country school did the most creative work, far more creative than anything my students in Melbourne were able—environmentally—to do, were allowed by the system to do. My school in Melbourne was supportive of the arts, but it was also a strictly surveilled, structured, and aspirational environment. Like many schools, the timetable was chock-full and there was a clear hierarchy of subjects. The environment—the macro conditions of my teaching and learning activities there—was very different and it negatively impacted both my students' and my own creativity. This is a familiar story to many teachers.

Connecting to the Macro

Connecting Barad's notion of agency to *macro-creativity* and how it fits with the *micro-creativity* conversation in education, can help us move

beyond the current over-analysis of creativity at the *micro* level, which seems to keep us stuck in the foreclosure space, and can move the conversation into the emergent interpretation and risk-taking spaces so desperately needed. Most creativity education re/currently focuses on teacher and schools' anxiety about how creativity should be 'delivered', assessed, and reported. Discussions too often seem to begin and end with debates about a (any) national curriculum's creative and critical thinking general capability, but several years on, this micro-approach has not produced more creative environments or individuals. My research on a macro approach² urges educators to now look beyond the instrumental or micro strategies that have dominated creativity education research in Australia for the past several years.

One way of thinking about the problem is that it's not a creativity problem at all, but rather an education policy one. We do not lack a definition of creativity, just the will to make space and time it in schools. I've argued this must be addressed at both a national and international education policy level (2016, 2017), representing the integrated long view that can open the door to a more ecological, or systems approach. By better linking the policy macro to the practice-oriented micro, education might shift from a 'problem-solving' approach to what design thinking calls 'problem-posing', or what Barad reminds us is a co-emergent encounter.

If 'creativity education' reflects an increasingly commodified education system, then the macro focus is on questioning what education is for, how creativity might serve the real versus the stated goals, and the micro is how to work backwards from that goal. Our national economic policy in Australia, like so many other national contexts, recognises and calls for a creativity imperative in education and workplaces that drives innovation (see Commonwealth of Australia 2017), but that doesn't include an interwoven education, arts and cultural sectors approach that offers more sustainable and better participatory community-building of the kind Craft (2013) was talking about, nor the kind of agency-event that Barad calls us to.³

Creativity (and its research) is emergent and situational. You might hear in all of these stories the tension between individual 'versus' collective notions of creativity, 'elite' versus 'democratic'. You might find a conflation of 'the arts' (in other words playwriting and screenwriting) with

‘creativity’. You might think that I am advocating an elite notion of creative arts in which some kids are ‘gifted’ and some are ‘not’, but you’d be wrong. I start with individual lived experience and link to the cultural big picture; my three pivotal moments are both contextualised in, as well as reflective of, the time and place in which they occurred—a factor all creativity education change-makers must take into greater account.

I believe, like my teachers did, that it is impossible to ‘make’ people creative. I have experienced that all people are not equally creative, both in orientation and in skill, an unpopular view to some, which I asserted in my 2014 book *The Creative Turn*. Students simply have different values, preferences and talents—a fact we have all seen in our classrooms. I wonder if these double standards are another expression of the anti-arts bias so pervasive in compulsory schooling? I have never heard Science or Mathematics educators argue that all students are mathematically gifted or equal. Yet education funders would never use this as an argument to not fund Science or Mathematics. Similarly, there are different kinds of creativity, different ability and skill levels in creative production, all of which require attending to (Simonton 2013). But that is different than nurturing a love of the creative, a respect for the arts, and investing robustly in establishing environments in which creative mindsets are valued and practised like mathematical times-tables. That would be a very different proposition, and—as Barad and others encourage us—would help move away from humanist projects of ‘fostering creativity’ altogether.

Synthesise (Ecosystem)

Redmond (2016) talks about ‘cultural tremors’ in which visual cultures are proliferating partly due to/embodied in visual online apps like Tumblr, Instagram, Snapchat, Kick. Circulation and recirculation is a core component of digital media but somehow not of education. Why are we still so reluctant in compulsory education to avoid the creative opportunities in workplaces and creative industries that are embedded in digital iteration and creative innovation? There seems to be a deep and pervasive aversion in education to admit that we are actually engaged in the

preparation of workforces. The rhetoric remains about preparing the whole child for 'the world', as if the world were inseparable from the workforce. We talk about socialisation, social change, multi-literacies, and collaboration, but we don't model it. The rhetoric about collaboration and multi-literacies falls quickly away in years 11 and 12 when students are tested individually, in writing, and in ways that reinforce the dominant values, most recently in relation to STEM. Even the timetable reflects these values. Students, thought-leaders and innovators are moving on without us. Students are learning, creating, and innovating outside of school, and the workforce is increasingly happy to work with new generations on their own terms, through alternate forms of credentialisation such as badging and internships, rather than university degrees and more traditional qualifications. The contemporary workforce is too agile, too flexible, and too rapidly shape-shifting to be satisfied by standardised testing and traditional disciplines in schools.

So why is STEM rising and STEAM falling? The narrowing of STEAM to STEM over the past several years mirrors in some ways the narrowing of 'creative and cultural industries' to the current digital-heavy 'creative industries'. Many university researchers are working so-called 'STEM' but not as an acronym for Science, Technology, Engineering and Mathematics, rather as a more generic acronym for 'interdisciplinary' or 'transdisciplinary' approaches to industry partnerships, 'real-world' impact, research and innovation for national and state-based agendas. They do not talk or worry about assessment of creativity in their STEM initiatives, they simply want more innovation, more collaboration across sectors, greater impact both culturally and economically through accelerating social change in and through creative cities. And where is the Education sector in those conversations? A ghost. Considered irrelevant by many, out of date by the others. In these funding streams and cross-sector collaborations, arts (or what is sometimes called 'creative practice') is central to all STEM collaboration, but it's creative practice for making roads more effective, for addressing housing issues, for social cohesion. Why doesn't school look or sound like these conversations and partnerships, and why are we too often not even at the table?

The problem, as I see it, is not that we don't know what a creative approach to our work can bring us, but that we don't trust that knowledge. We don't need more data, we need action; but action is frightening, so we prefer to accumulate more data. Yet research into contemporary networked cultures has well documented that accumulation of more data only presents new challenges like effective curation, use of the data, critical analysis skills, etc. Design thinking has become increasingly popular because it offers a practical model—some real steps—for working through problems in a generative and embodied way. But design thinking has its own neoliberal biases. When businesses seek creative consultants, it is to improve productivity. Schools 'outputs' or productivity is measured in grades and university entrance success, so logically creativity education seeks assessment first rather than environment-building. Yet university entrance scores are widely recognised as an increasingly outmoded measure of success, less tied to national and global economic goals of a rapidly changing workforce.

Businesses don't address underachievement by setting exams for their employees, they look to changing the terms of engagement, and the number one focus of creative workforce analyses is environmental. They seek to improve the conditions for creative innovation by their employees through engineering collaborative opportunities for play (ping pong etc.), they reward brainstorming, community-building, and recognise the power of the formative creative work going on in these 'team-building' activities. They encourage lateral thinking, flexible and interdisciplinary thinking, and problem solving. They change the conditions of employment and the workforce moves with them. Of course, performativity matters in any non-personal context, so some level of risk-aversion is understandable. There are ways in which failing is still penalised in work environments as well as schools. But the environment and the approach are markedly different, highlighting the ineffectuality of a standardised approach to doing and measuring creativity. Surely if multinational corporations can risk an investment in new ideas and productive risk-taking, then schools can too?

Creative Agency and Intercultural Research

Synthesising Barad's notion of agency as more than an inherent personal skill or capacity, with my own scholarship on creative ecologies offers the conditions for creative experimentation and expansion. My current research reflects this ecological notion of creative agency, and a globalised, networked approach to fostering creativity in education and workplace contexts or ecologies (Harris 2017). My Australian Research Council-funded project "*Transforming 21st Century Creativity Education in Australasia*" (2017–2021) uses some principles of design thinking to investigate regional creativity across the Asia Pacific (including Australia), and across the education-to-work trajectory. The project investigates intercultural understandings of, and strategies for, the need to build creativity as an education and workplace skill. As a core component of creative economic and cultural policy, this study argues there are benefits to working in a networked intercultural and regional way towards context-specific creative skills and strengths.

The study is concerned with generating new interdisciplinary and policy knowledge into how regional co-operation, marked by new models of educational and workplace training, are emerging and equally importantly are becoming embedded in cultural understandings of the knowledge economy. By drawing on creative environmental, digital and posthuman theories, this project is oriented towards multiple sectors including education, cultural and digital futures. Through improvement of creative education pathways and alignment with regional creative and cultural industries standards, this research holds both theoretical as well as policy contribution goals. To ensure creative and cultural industrial advancement in our region, it is necessary to conduct research into creativity that is more than just instrumental—that is, the macro (regional) joined with the micro (studying local practices and values) within linked nation-based contexts. That is, research that is onto-epistemological, as well as practice-led, and that is able to influence education and economic policy through a linked examination of both industry as well as university training.

Towards Creative Communities

So what of Barad's notion of agency, and the return to the posthuman as the event of creativity, the pleasure of creativity, and our Craftian commitment to making the conditions of creative emergence? A synthesis of creativity education, industries and agency converge in the kind of future-thinking I have contrasted here, building on some pivotal creative economies work from the USA. Theresa Amabile has said "Creative thinking refers to *how* people approach problems and solutions—their capacity to put existing ideas together in new combinations" (1998, n.p.) and it remains at the centre of the 'creativity problem'. She says that managers, like schools, more often kill creativity than nurture it because while "most believe in the value of new and useful ideas, creativity is undermined unintentionally every day in work environments that were established—for entirely good reasons—to maximize business imperatives such as coordination, productivity, and control" (1998, n.p.). Sound familiar?

Education has much to learn from workplace creativity studies. Amabile tells managers that to enhance creativity in their workplaces they should pay attention to what managerial practices affect creativity. They fall into six general categories: challenge, freedom, resources, work-group features, supervisory encouragement, and organisational support. Amabile's Progress Principle says that in organisational creativity, good managers are good collaborators, demonstrate positive emotions, are strongly motivated, and model positive thinking. She lectures widely on how to combat disengagement in the workplace—a challenge we confront in most schools. She says workers often feel de-motivated, through feeling devalued, and that both tangible and intangible motivators are really important! (Sounds like extrinsic and intrinsic motivators in education). So we can ask, as Amabile does about workers in workplaces, what is motivating students today? For one thing, and unsurprisingly, performance is higher when they are happier, have more positive feelings about their organisation and co-workers, and that positive performance results from an opportunity to be creative. In other words, there is a link between feeling happy and being creative, in seeing their contributions as valued.

Making sense of the events of their (work)day. It matters how people feel at work, and school. Making progress in meaningful work. Now can we say the same about the work we set and engage in with our students? Too often, I think that answer is no.

My interest in creativity in and beyond education contexts combines attention to both a macro, and a micro, view of change. This ‘creative ecologies’ approach recognises that building and enabling creative environments and networks allow all participants (both human and nonhuman) to creatively generate and evolve in more effective but also more satisfying ways, and in ways that are wonderfully impossible to predict. Facilitating encounters and opportunities is surely a best way forward as both educators and also creatives. This kind of networked intra-action becomes true creative agency.

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Notes

1. Like Barad’s agential realism, a creative ecologies approach theorises the need to move from individualist projects (in Barad’s case metaphysics, in mine creativity) to more collectivist.
2. including the 2016 Harris Whole School Creativity Audit, the Harris Creativity Index, and empirical data upon which it is founded, can be seen in Harris (2016)
3. For more national creativity education policies, see *Creative Learning through the Arts: An action plan for Wales 2015–2020*, still the only national transdisciplinary creative arts curriculum in the world (Arts Council Wales 2015); Forrester and Hui (2007) on creativity in Hong Kong classroom; OECD (2015) on Korean classroom creativity training.

References

- Amabile, T. (1998). How to Kill Creativity. *Harvard Business Review*. <https://hbr.org/1998/09/how-to-kill-creativity>
- Ambrose, D. (2005). Creativity in Teaching: Essential Knowledge, Skills and Dispositions. In J. C. Kaufman & J. Baer (Eds.), *Creativity Across Domains: Faces of the Muse* (pp. 281–298). Hillsdale: Lawrence Erlbaum Associates.
- Arts Council Wales. (2015). *Creative Learning Through the Arts: An Action Plan for Wales 2015–2020*. Cardiff: Department for Education and Skills.
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2011). Australian Curriculum. Available at: <http://www.acara.edu.au/curriculum>
- Australian Institute for Teaching and School Leadership. Teacher Standards. <https://www.aitsl.edu.au/teach/standards>
- Australian Qualifications Framework (AQF). <https://www.aqf.edu.au>
- Barad, K. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Barad, K. (2012). Interview. In R. Dolphijn & I. van der Tuin (Eds.), *New Materialism: Interviews and Cartographies* (pp. 48–70). Ann Arbor: Open Humanities Press.
- Bentley, T., & Savage, G. C. (Eds.). (2017). *Educating Australia: Challenges for the Decade Ahead*. Melbourne: Melbourne University Press.
- Cho, N., Oh, E., Kwon, J., Kim, H., Chi, E., & Hong, W. (2011). *A Study on the Improvement of Secondary School Education to Bring Up Students' Creative Talents (KICE Research Report)*. Seoul: Korea Institute for Curriculum and Evaluation.
- Commonwealth of Australia. (2017). *Innovation and Creativity: Inquiry into Innovation and Creativity: Workforce for the New Economy*. Parliament of the Commonwealth of Australia. Canberra: Government Printers. Available at: <https://www.aph.gov.au/innovationcreativity>
- Craft, A. (2008). Studying Collaborative Creativity: Implications for Education. *Thinking Skills and Creativity*, 3(3), 241–245.
- Craft, A. (2013). Childhood, Possibility Thinking and Wise, Humanising Educational Futures. *International Journal of Educational Research*, 61, 126–134.
- Craft, A., Gardner, H., & Claxton, G. (2007). *Creativity, Wisdom and Trusteeship: Exploring the Role of Education*. Thousand Oaks: SAGE.
- Creative Australia. (2013). *National Cultural Policy*. Commonwealth of Australia. ISBN: 978-1-922060-23-5.

- Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention* (1st ed.). New York: HarperCollins.
- Dikici, A. (2014). Relationships Between Thinking Styles and Behaviors Fostering Creativity: An Exploratory Study for the Mediating Role of Certain Demographic Traits. *Educational Sciences: Theory and Practice*, 14(1), 179–201.
- Dolphijn, R., & van der Tuin, I. (2012). *New Materialism: Interviews and Cartographies* (pp. 48–70). Ann Arbor: Open Humanities Press.
- Ewing, R. (2011). The Arts and Australian Education: Realising Potential. *Australian Education Review*, 58. Retrieved from <http://research.acer.edu.au/aer/11>
- Ewing, R. (2015). Dramatic Play and Process Drama: Towards a Collective Zone of Proximal Development to Enhance Language and Literacy. In S. Davis, H. Clemson, B. Ferholt, S.-M. Jansson, & A. Marjanovic-Shane (Eds.), *Dramatic Interactions in Education: Vygotskian and Sociocultural Approaches to Drama, Education and Research* (pp. 135–152). New York: Bloomsbury Academic.
- Ewing, R., & Gibson, R. (2015). Creative Teaching or Teaching Creatively? Using Creative Arts Strategies in Preservice Teacher Education. *Waikato Journal of Education*, 13(Special Issue on Creative Research and the Arts), 159–179. <https://doi.org/10.15663/wje.v20i3.225>.
- Ferrari, A., Cachia, R., & Punie, Y. (2009). *Innovation and Creativity in Education and Training in the EU Member States: Fostering Creative Learning and Supporting Innovative Teaching*. JRC Technical Note, 52374.
- Forrester, V., & Hui, A. (2007). Creativity in the Hong Kong Classroom: What Is the Contextual Practice? *Thinking Skills and Creativity*, 2(1), 30–38.
- Gollmitzer, M., & Murray, C. (2008). *From Economy to Ecology: A Policy Framework for Creative Labour*. Ottawa: Canadian Conference of the Arts.
- Gu, J., Zhang, Y., & Liu, H. (2014). Importance of Social Capital to Student Creativity Within Higher Education in China. *Thinking Skills and Creativity*, 12, 14–25.
- Harris, A. (2014). *The Creative Turn: Toward a New Aesthetic Imaginary*. Rotterdam: Sense.
- Harris, A. (2016). *Creativity and Education*. London: Palgrave Macmillan.
- Harris, A. (2017). *Creative Ecologies: Fostering Creativity in Secondary Schools*. Final Report DECRA, Australian Research Council. Available at: <https://www.creativeresearchhub.com/reports>

- Harris, A., & de Bruin, L. (2017). STEAM Education: Fostering Creativity In and Beyond Secondary Schools. *Australian Art Education*, 38(1), 54–75.
- Hearn, G., Roodhouse, S., & Blakey, J. (2007). From Value Chain to Value Creating Ecology: Implications for Creative Industries Development Policy. *International Journal of Cultural Policy*, 13(4), 419–436.
- Howkins, J. (2011). *Creative Ecologies: Where Thinking Is a Proper Job*. Piscataway: Transaction Publishers.
- Kacerauskas, T., & Zavadskas, E. K. (2015). Creative Ecology in Academic Environment. *Filosofija Sociologija*, 26(3), 239–248.
- Lucas, B., Claxton, G., & Spencer, E. (2013). *Progression in Student Creativity in School: First Steps Towards New Forms of Formative Assessments*. OECD Education Working Papers. Retrieved from http://www.oecd-ilibrary.org/education/progression-in-student-creativity-in-school_5k4dp59msdwk-en
- McWilliam, E., Poronnik, P., & Taylor, P. G. (2008). Re-designing Science Pedagogy: Reversing the Flight from Science. *Journal of Science Education and Technology*, 17(3), 226–235.
- Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). (2008). Melbourne Declaration on Educational Goals for Young Australians. Available at: http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf
- Munday, I. (2016). A Creative Education for the Day After Tomorrow. *Journal of Philosophy of Education*, 50(1), 49–61.
- New South Wales Department of Education and Training (NSW DET). (2003). *Quality Teaching in NSW Public Schools: A Discussion Paper*. Sydney: Professional Support and Curriculum Directorate, NSW DET.
- Noh, J., & Huh, N. (2015). Integrating Math and Music: Teaching Ideas. *Research in Mathematical Education*, 19(3), 177–193.
- OECD. (2015). *Korea: Policy Priorities for a Dynamic, Inclusive and Creative Economy, Better Policies Series*. Paris: OECD Publications.
- Queensland Government. (2003). *New Basics Project: Productive Pedagogies*. <http://education.qld.gov.au/corporate/newbasics/html/pedagogies/pedagog.html>
- Redmond, E. (2016). *Keeping in Touch: The photography of Hobbes Ginsberg and Online Materiality* (Unpublished MA thesis). California College of the Arts.
- Reilly, R. C., Lilly, F., Bramwell, G., & Kronish, N. (2011). A Synthesis of Research Concerning Creative Teachers in a Canadian Context. *Teaching and Teacher Education*, 27(3), 533–542.

- Sawyer, R. K. (Ed.). (2011). *Structure and Improvisation in Creative Teaching*. London: Cambridge University Press.
- Shin, N., & Jang, Y. J. (2017). Group Creativity Training for Children: Lessons Learned from Two Award-Winning Teams. *The Journal of Creative Behavior*, 51(1), 5–19.
- Simonton, D. K. (2013). What Is a Creative Idea? Little-c Versus Big-c Creativity. In K. Thomas & J. Chan (Eds.), *Handbook of Research on Creativity* (pp. 69–83). Northampton: Edward Elgar Publishing.
- Stankeviciene, J., Levickaite, R., Braskute, M., & Noreikaite, E. (2011). Creative Ecologies: Developing and Managing New Concepts of Creative Economy. *Business, Management and Education*, 9(2), 277–294.
- Tan, A. G. (2014). Creativity in Cross-Disciplinary Research. In E. Shiu (Ed.), *Creativity Re-Search: An Interdisciplinary and Multidisciplinary Research Handbook* (pp. 68–85). London: Routledge.
- Torrance, E. P. (1987). Teaching for Creativity. In S. G. Isaksen (Ed.), *Frontiers of Creativity Research: Beyond the Basics* (pp. 189–215). Buffalo: Bearly Limited.
- Van Harpen, X. Y., & Sriraman, B. (2013). Creativity and Mathematical Problem Posing: An Analysis of High School Students' Mathematical Problem Posing in China and the USA. *Educational Studies in Mathematics*, 82(2), 201–221.
- Warwick Commission. (2015). *Enriching Britain: Culture, Creativity and Growth*. Coventry: Warwick University. Retrieved from https://www2.warwick.ac.uk/research/warwickcommission/futureculture/finalreport/warwick_commission_report_2015.pdf
- Wright, N., Davis, R., & Bucolo, S. (2013). The Creative Citizen: Understanding the Value of Design Education Programs in the Knowledge Economy. In *Proceedings of the 2nd International Conference for Design Education Researchers* (Vol. 4, pp. 2230–2248). Oslo: ABM-media.
- Wyn, J. (2009). *Touching the Future: Building Skills for Life and Work*. Australian Education review/Australian Council for Educational Research (ACER). Available at: <https://research.acer.edu.au/cgi/viewcontent.cgi?article=1008&context=aer>



5

Value-Adding in Higher Education: Complementary Contexts for Learning Creativities

Jonathan Purdy, Vinesh Chandra, and Kelli McGraw

Introduction

The ability to create and innovate has been critical to the progress and prosperity of humanity. The need to nurture and develop the creative talents of future generations has been highlighted in government policies throughout the world. In our roles as researchers, educators and curriculum developers

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in higher education (HE), our interest lies in how HE students learn creativity. Many HE institutions explicitly state a desire to graduate students who are creative and innovative. This chapter interrogates creativity as a graduate attribute and the status quo of learning creativities in HE contexts. It also investigates the ‘value adding’ opportunities that complementary contexts, such as community engaged learning and extracurricular activities, provide for learning creativities. It draws on the literature rather than empirical evidence to generate an understanding of learning creativities across different contexts. Student scenarios, based on our experience of teaching in HE, are provided throughout the chapter to elucidate the approaches to learning creativity.

Learning Creativity in Higher Education (HE)

Our experiences suggest that a significant challenge facing HE is the gap between creativity capabilities of graduating students and societal expectations. This could be attributed to several reasons that include: (a) the absence of coherent definitions of creativity in HE; (b) a lack of specific approaches to learning creativity; (c) a variety of creativities practised across HE disciplines and their associated professions; and (d) undervaluing creativity across the education lifespan. This section explores learning creativity in HE through three questions: Why should students learn creativity? How is creativity being taught and learned in contemporary contexts? What are the challenges and opportunities to improve creativity learning outcomes? (Sinek 2009)

Why Should Students Learn Creativity?

A demand for creativity skills and knowledge is emanating from industry and community organisations. Data collected by the Foundation for Young Australians (2016) from Australian job postings in the period 2012–2015, for early career roles, indicates an increase of 65% in demand for creativity skills. According to the British innovation foundation Nesta and the University of Oxford, creativity, critical judgement, and adaptability would be essential attributes for graduates

seeking employment in 2030 (Bakhshi et al. 2017). The cognitive skills required to achieve these attributes will include “originality,” “fluency of ideas,” and “decision-making” (Bakhshi et al. 2017, p. 76). If this is the case, then the results from Torrance Tests of Creative Thinking, indicating a loss of creativity ability, are alarming (Kim 2011). Of note is that the study was conducted over a 30 year period with more than 270,000 kindergarten children to adults (Kim 2011). Kim (2011) provides evidence of stagnation or decline in ‘fluency of ideas’, ‘originality’ and ‘elaboration’.

To address the static or declining results, a trend is emerging amongst HE institutions. Creativity, innovation or entrepreneurship have become common graduate attributes alongside related phrases such as ‘ability to generate ideas’ and ‘problem solving skills’. Students completing, for example, bachelor’s degrees in Australian universities are expected to demonstrate graduate attributes, such as ‘creative thinking’ and ‘critical judgment’. An individual unit in, for example, an Education degree programme provides opportunities for the student to demonstrate that they can, ‘design formative and summative assessment tasks,’ ‘create a safe and supportive learning environment’ and ‘reflect critically on teaching practices’ (Queensland University of Technology n.d.-a; Southern Cross University n.d.-b; Victoria University n.d.). However, creativity, design thinking and critical thinking may not necessarily be taught in the unit. Disparities are evident between what universities expect of their graduates, and what is explicitly taught in each unit. A level of skill and knowledge of creativity is often assumed of HE students. This assumption is consistent with Livingston’s (2010) suggestion that students already possess creativity. However, it is questionable whether their creativity is understood, enhanced or explicitly supported. The following *Student scenario 1* describes discrepancies between desired outcomes and student learning. The scenario is the first of three in this chapter. The three scenarios are provided to illuminate disparities in, missed opportunities of, and potentiality for learning creativity in HE. The scenarios are based on the authors’ experiences of teaching, researching and developing curriculum in HE.

Student Scenario 1: Disparity Between Desired Outcomes and Student Learning

Dana is studying business and has clear aspirations of running a finance company. Five of the twenty-four units in the bachelor of business degree state 'creativity' as an aligned graduate attribute. This indicates that the learning outcomes, content and assessment tasks in the five units should be enhancing Dana's ability to 'generate new and effective responses to intellectual, social and professional challenges'. However, of the five units, only one explicitly teaches creativity skills and knowledge. The other four units assume a level of creativity. The content, learning activities and learning outcomes of the other four units are not aligned with the 'creativity' graduate attribute. The four units are not explicitly supporting Dana's creativity learning.

Creativity is a desirable graduate attribute but there are inconsistencies, as highlighted in *Student scenario 1*, in how creativity is taught and learned in HE. Creativity has omnipresence rather than an explicit position within learning and teaching.

The Status Quo. How Is Creativity Being Taught and Learned in Contemporary Contexts?

HE teachers and students have varying conceptions of creativity. Creativity is associated with activities and skills such as brainstorming, ideation, imagination, play, improvisation, divergent thinking, non-conformity, risk-taking, expressing ideas, designing, experimenting, problem-solving, modifying, convergent thinking, making prototypes, and evaluating (Gaspar and Mabic 2015; McWilliam and Taylor 2016). The variety of conceptions are indicative of discipline specific approaches to creativity (Marquis and Henderson 2015). The resulting creativities in different disciplines are based on models that are suited to the needs of the field or discipline. Some models of creativity involve facets, maxims, factors and dimensions that afford different disciplines an opportunity to shape the learning of creativities (Bledsoe and Khatena 1973; Jahnke et al. 2015; Kazerounian and Foley 2007). However, as individual fields and disciplines define creativity differently, there are also inconsistencies in conceptions of how creativity is learned.

For creativity to gain any traction in HE, it needs to be explicitly taught. Herein lies the tension. Lin (2011, p. 152) suggests that to attain creativity knowledge and skills, students need to be provided with opportunities for “playfulness, ... collaboration, ... development for imagination and possibility thinking...” and the establishment of a “... supportive/resourceful context”. In such contexts, students get an opportunity to “understand, harvest, and build up the very creativity” that they already possess (Livingston 2010, p. 61). In the secondary school context, Harris (2017, p. 46) calls for a “new conceptual framework...called a creative ecological approach”. Forming creativity ecologies is a challenge for HE institutions. Jackson (2016a) posits that students be the centre of their learning ecologies and that HE teachers provide resources and infrastructure to support the student ecologies.

What Are the Challenges and Opportunities?

A difficulty that HE institutions and their graduating students face is the aspirational nature of generic graduate attributes. For example, “Creativity: an ability to develop creative and effective responses to intellectual, professional and social challenges” (Southern Cross University [n.d.-a](#), para. 2) or “Employ different ways of thinking, broad perspectives and evidence-based decision making to inform practice, and to imagine and realise change” (Queensland University of Technology [n.d.-b](#), para. 6). However, Donleavy (2012) warns that knowledge and skills inherent in graduate attributes are “not devolved onto any one course-coordinator, head of school or even PVC (teaching and learning) for their implantation.” He notes a disconnect by pointing out that attributes may be “characterised as aspirational but not descriptive of actual, general, verified practice” (Donleavy 2012, p. 348). Thus, universities run the risk of graduating students without the requisite graduate attributes. Many institutions map graduate attributes, learning outcomes, learning activities and evidence of learning through assessment. However, holistic attributes such as creativity are greater than a collection of mapped assessment items. Our experiences in HE suggest it is challenging to evidence student acquisition of creativity knowledge and skills within the existing framework.

An additional challenge is the increasing diversity of students in HE. The diversity makes it necessary to offer a variety of learning experiences. It is more difficult to apply a 'one size fits all' learning and teaching approach. Hockings (2011), in research conducted in two universities in England, identifies the challenges of creating an inclusive environment for such diverse student cohorts. Students feeling isolated react by leaving or seeking alternative learning experiences. The opportunity with diverse cohorts is to provide choice. Hockings (2011) describes how teachers.

created open and flexible activities that students could tailor for themselves by bringing their own knowledge, experiences and backgrounds to bear on them. By doing this, all students had the opportunity to make the subject relevant and meaningful to their own lives. (Hockings 2011, pp. 196–197)

The notion of expanding possible spaces and contexts for learning, more suited to individual students, is not new. More than 70 years ago, Brew (1946) emphasised the potential of broadening the range of learning experiences, events, and settings.

Another significant driver in HE is the neoliberalist focus on the economic gain from mass-education (Hockings 2011). For Hockings, a liberal approach to HE is being squeezed out in favour of courses that directly lead to employment. Therefore, students choosing employment-aligned courses may not learn creativity, as it is more likely to be taught in the arts disciplines. Other disciplines, some aligned closer to the workplace (for example Engineering or Information Technology), may not prioritise creativity learning. The need for graduating students, from all fields, to acquire creativity skills and knowledge is widely recognised (Bakhshi et al. 2017; Foundation for Young Australians 2016; Gaspar and Mabic 2015). In contrast, the opportunity exists for complementary contexts such as community engaged learning and real-world learning, to add value to HE students' creativity learning in all disciplines; providing students with a smoother transition to the workplace.

Alternative Spaces and Contexts for Learning and Teaching in HE

As a response to the challenges and opportunities outlined above, such as meeting society's expectations, the aspirations of HE institutions and diversity of student cohorts, this section will delve into the opportunities for learning creativity in alternative spaces and contexts. Alternative spaces may be external to HE institution environments. The learning may be extracurricular, virtual or community-based and be under the auspices of businesses, community organisations, special interest groups, learning hubs, or cultural organisations. Such organisations offer students extracurricular projects, volunteering opportunities and real-world experiences. The environments provide unique opportunities for students to enhance their creativity skills. In the past, HE has limited this type of community engagement to service, placements or work-integrated-learning. HE struggles to offer what Ellsworth (2005, p. 5) describes as "the most provocative and promising places ... of learning: peculiar, irregular, abnormal, or difficult to classify pedagogical phenomena". The impetus for change is recognition that HE institutions are limited in their capacity to provide such learning places that may help to develop students' creativities.

Why Should Alternative Spaces and Contexts Be Utilised?

Students are independently experiencing learning activities that support their need for 'up to date' capabilities. In support of this, Runco (2014) posits that learning often happens away from educational institutions, and Sandlin et al. (2011) utilise the terms 'extrainstitutional' and 'public pedagogies' to describe learning that occurs outside formal institution spaces. Ellsworth (2005) takes the notion of public pedagogies further, highlighting how

architects, artists, performers, media producers, and designers of content-based experiences, museum exhibitions, and public spaces are inventing

“processual paths,” “communicative instruments,” urban “critical vehicles,” theatrical performances, provocative interactive encounters, architectural spaces, and mediated cityscapes – with pedagogical intent. (Ellsworth 2005, p. 6)

While these types of epistemic practices, including knowledge acquisition in virtual spaces, are available to HE students, the key challenge for HE institutions is to acknowledge this and validate practices that best support and enhance students’ learning of creativity.

Benefits for Learning

Activities, resources, processes, and interactions with people in alternative spaces and contexts affect learning of creativities across disciplines. Elisondo et al. (2013) state that alternative contexts can build on a student’s interests and enthusiasm for creativity. Providing opportunities, driven by what the student needs, promotes student agency and self-directed learning. This approach constitutes a move from an instructional paradigm to a learning paradigm, where the student becomes the focus. The unexpected nature of alternative spaces and contexts can also be an enabler of learning creativity. Elisondo et al. (2013, p. 12) identify links between cognitive components of creative thinking, such as “conceptual expansion” and “knowledge activation”, and the “unusual and unexpected events and experiences” that may occur in alternative spaces and contexts. Building on this position, Philip (2015) claims that constraints can have a positive impact on learning creativity:

activities had clear boundaries around scope, time and task, but offered students maximum freedom to express themselves and meet task constraints without encountering excessive risk, or suffering from “analysis paralysis” because there were too many options. (Philip 2015, p. 225)

Constraints are inherent in all learning contexts, but if environments and conditions are managed, then they can become enablers of learning creativity. Sometimes enabling transgression, without unnecessary risk, will allow creativity to flourish. For example, students learning beyond

HE classrooms, without the pressure of assessment, can ‘make a mess’, experiment and fail.

Unexpected conditions and ‘messiness’ may occur in alternative contexts presenting inimitable situations, where unique actions and reactions are possible. Elisondo et al. (2013) state that

the unexpected creates an innovative, different and dynamic context in which it is possible to develop ideas, create products and interact with others in different ways. The unexpected opens possibilities also unexpected to learn in a different way in higher education contexts. (Elisondo et al. 2013, p. 12)

The real-world nature of extrainstitutional contexts offers opportunities for open and original thinking; to make decisions in response to unanticipated conditions. The following vignette provides an example of such an opportunity.

When Food Science students worked in partnership with companies and not-for-profit organisations in the food science industry, the collaboration resulted in a range of creativity learning outcomes. The task was to create a new food product: one group of students worked with a gelato company to grow beneficial bacteria in chocolate; a second group created lollies that made people hungry; and a third group made shelf ready products out of food scraps. The students were given opportunities to apply creativity processes, experiment, develop prototypes, fail, and develop skills of non-conformity and possibility thinking (V. Purdy, personal communication, March 4, 2018).

There are significant benefits for students in experiential learning contexts, supported by industry or community, teachers and other learners (Bridgstock 2013; Dewey 1938; Kolb 2014). HE institutions become the hub in the wheel of learning contexts and activities, with the purpose of keeping student learning progressing forwards.

Challenges of Managing Positive Learning Outcomes

When alternative spaces and contexts are provided by third parties, there is potential for incomplete projects and diminished learning experiences

for students (Block and Lindeke 2013). This is largely because these organisations participate on a voluntary basis. For this reason, management of relationships and communication between HE institutions, students and extrainstitutional organisations is essential. Block and Lindeke (2013) posit that without firm agreements in place, students may not receive favourable opportunities to learn from organisations with limited resources.

Students learning through a distance education mode are additionally at risk of poor outcomes. Without close contact with teachers and administrators, it is more difficult to build and maintain relationships and communication between the parties involved in the learning. Geographically distant parties, consisting of the student, HE staff and the extrainstitutional organisation, rely on technology-mediated interactions. Soria and Weiner (2013) note that when students are learning at a distance and engaging in alternative spaces and contexts, they rely heavily on online resources that guide their learning. The following enablers address these challenges, especially when students are empowered to take control of their learning, with explicitly designed institutional support.

Enablers of Complementary Contexts

Learning Ecologies Supported by HE Institutions

Learning ecologies are an approach to designing and recognising numerous activities and experiences that contribute to learning creativity. Institutions and students can determine the contexts, spaces, people, resources, relationships, and processes with which to engage (Jackson 2016b). Some ecologies are institution-driven and provided in formal contexts. Other ecologies are determined by students and situated in alternative contexts such as extracurricular learning and communities of practice. Self-directed learning may take students completely outside the HE institution where their learning is guided by intrinsic motivation. When self-directed learning is supported by the institution, learning goals are still evident, but the context is more likely to be experiential and real-world (Jackson 2016b). In a work-integrated learning context,

Zelenko and Bridgstock (2014) suggest that students design their role and professional identity, taking control of their learning. Such an approach promotes agency, strategic self-awareness and confidence. These are dispositions that contribute positively to learning creativity (Davies et al. 2013; Deakin Crick and Goldspink 2014).

When students can choose the contexts for their learning, the conditions, project aims and outcomes will likely suit their learning needs. The education institution has less influence on the outcomes and therefore less likely to provide redundant or repetitive learning activities (Jackson 2016a). Norton (2013) proposes that HE institutions unbundle course delivery, thereby allowing students to target their own learning. Objectives and achievements can be determined by students, in consultation with mentors, directors, managers, and project leaders (Jackson 2016b). Students arrive at a community engaged learning environment ready to offer skills and knowledge, but also presenting gaps in prior learning. The experiential learning activities offer students a chance to fill the holes in their learning ecology; holes that have been difficult to address in formal education settings.

Extracurricular Learning and the Role of Explicit Design

Students gain an additional set of creativity skills and knowledge from extracurricular learning. Extracurricular learning exists outside the curriculum and offers broader learning activities. It is distinguishable from co-curricular learning which is aligned to course-work in formal education institutions. Extracurricular learning may help students develop a broader range of creativities; creativity behaviours, capabilities, and dispositions that may not be specific to a discipline. Davies et al. (2013) emphasise the contribution of time as a factor in learning creativity. Opportunities to spend time away from the limitations of a formal education environment can encourage the development of abilities and knowledge. For example, “developing contact with significant people, learning theoretical and practical knowledge, solving complex problems and articulating theory and practice” (Elisondo et al. 2013, p. 12). Formal education environments sometimes struggle to accommodate these aspects of learning. Creativity skills and knowledge can be supported and

enhanced in community organisations, businesses, special interest groups, and cultural organisations. Such entities practise creativity and innovation. Students engage and collaborate with them, enabling extracurricular creativity learning (Davies et al. 2013). The benefits of extrainstitutional learning are emphasised in *Student scenario 2*.

Student Scenario 2: Extraintitutional Learning

Joshua is studying education and has experienced creativity learning in alternative contexts before studying at university. Some of the extraintitutional learning has continued during his formal HE. First, Joshua supports his year three brother's learning at home within the context of homework. He uses creativity to design props and learning scaffolds to help his brother understand fractions. Second, Joshua is a swimming coach and makes swimming lesson videos with his fellow swimming coaches. The swim school is using the videos for social media marketing. Joshua uses online tutorials to gain creativity knowledge and skills in video production, video editing and social media marketing strategies. Although Joshua is immersed in formal and informal extraintitutional learning activities, there is no direct connection with his formal HE learning. It could be argued that Joshua's prior and concurrent learning gives him a basis from which to build knowledge and skills in his education study. However, without explicit design and recognition of the numerous activities and experiences that contribute to his learning creativity, Joshua is left with a disconnected set of skills and knowledge rather than an integrated ecology.

Learning creativity in extraintitutional contexts may contribute to a student's formal HE learning. However, a lack of integration may result in incongruous learning outcomes. Complementarity is more likely to occur when HE institutions explicitly accept and recognise learning in extraintitutional contexts.

Integration in Practice (Current Models for Implementing Alternative Learning Spaces and Contexts)

Situated in the current HE environment, the approaches outlined in the following sections offer strategies for combining learning that occurs in

alternative contexts with formal learning in educational institutions. These strategies build on previously explored isolated approaches to learning. Extracurricular learning, for example, is advocated to extend the creative capabilities of students but it may not directly link to their learning in a HE curriculum. Highlighted here are approaches that inherently function with formal HE learning.

Lifelong Learning from Learning Ecologies in HE

A learning ecology approach that incorporates both formal and extrainstitutional learning offers students more than the teacher-controlled learning environment with its limited range of learning activities. A learning ecology also suggests that learning is not a finite set of time-limited activities. Evident in most HE institutions is the graduate attribute of lifelong learning. Supporting students to create their learning ecology is consistent with the development of lifelong learning. HE institutions providing environments conducive to personal knowledge construction is at the behest of students eager for lifelong learning (Ellis and Goodyear 2010). Regardless of the learning context, students should be able to combine, synthesise and accumulate the requisite abilities, skills, attitudes, behaviours, knowledge, dispositions, competencies and capabilities for their lifelong learning aspirations.

Service Learning

Also known as *community engaged learning (CEL)*, service learning combines community-based learning and formal learning for the benefit of both the students and the community (Sandaran 2012). Service learning allows students an opportunity to apply their formal learning in real-world contexts. Importantly, the community-based activities have learning outcomes linked to the formal learning. The knowledge and skills that students acquire in community-based contexts can inform further learning in their formal education environment. The learning is not isolated, as two or more situations of learning are connected to facilitate an extension of learning. Chandra and Tangen (2018) reported that service

learning also enables students to apply their disciplinary knowledge together with creative and critical thinking, collaboration and communication (4Cs) skills to solve seen and unseen problems in real-world projects.

The environment for service learning almost always involves a change for students. They are presented with unfamiliar settings in which to apply prior knowledge and skills then continue familiar practices. Furthermore, the students experience new limitations, unanticipated challenges, and conditions of which they are unacquainted. These facets of service learning are conducive to continuing and enhancing creativity practice (Stephenson and Yorke 2013). However, an alternative environment, while beneficial to learning creativity, may present a challenge of integration with formal learning. Hervani and Helms (2004) assert that connections between community agencies and staff in the formal learning environment are essential for positive outcomes in service learning. Official arrangements involving memorandums of understanding and authorised agreements provide transparency and understanding of the needs of the students.

Benefits can also be gained by students before and after learning in the community setting. When students are involved in choosing a community-based setting, an opportunity exists for them to practise creative thinking. A range of possible settings may be available (divergent thinking). Determining the best fit for their learning goals refines the number of possible settings (convergent thinking). This process can help students develop dispositions aligned with creativity: curiosity; understanding of self; and initiative (Deakin Crick and Goldspink 2014). The enactment of self-directed strategies helps students acquire creativity skills (Davies et al. 2013; Jackson 2016b). The benefits of service learning can be enhanced through students reflecting on their learning. Hervani and Helms (2004) maintain that reflection connects the community-based activities with the students' formal learning. When students think, talk and write about the real-world experiences in community settings, they make connections with their prior and future formal learning.

Connected Learning

Learning accomplished in discrete contexts can be heightened by utilising a connected learning approach. Everyday experiences and activities in informal learning settings can enhance formal learning (Sharples et al. 2015). Correspondingly, knowledge and skills acquired in formal learning can support learning in extrainstitutional settings. Utilising prompt questions and discussion is favoured by Sharples et al. (2015) as a method of implementing and sustaining connected learning. Two or more learning activities are compared, contrasted or drawn together. Ito et al. (2013, p. 4) argue that interest-driven connected learning links “home, school, community and peer contexts of learning”. They suggest that common interests and sympathetic relationships are vital in maintaining learning across peer cultures and wider communities.

Spiral Learning

A spiral learning approach has its origins in the experiential learning theory of Kolb and Kolb (2005). Students are actively involved in the learning process. The learning spiral, originally described by Kolb and Kolb (2005) as a learning cycle, starts with an experience of the student. This is followed by reflection, then thoughts and ideas. Completing the cycle is action and testing. Brown (2006) offers an alternative application of spiral learning, suggesting that practice-based learning and knowledge of content should closely support and complement each other. Brown (2006, p. 4.53) contends that content and practice are woven in “a tapestry between activities in the niche communities of interest and the core curriculum, with both serving to ground and complement the other”. In the context of learning creativity, an interchange is reached when knowledge and skills feed creative practice, and practice directs the acquisition of new knowledge.

Integration Through Critical Reflection and Double Loop Learning

Integration and enhancement of a range of learning experiences can be achieved through reflection. In advocating this, Cross (2010, p. 44) claims that “without reflection, there is no learning”. Students are experiencing a changing world and an increase in types of learning activities and social situations. They need mechanisms to frame their learning and make sense of their world. Cross (2010) predicts students with future attributes such as ‘network artist’ and ‘reflection professional’ will be equipped to make connections between learning experiences. Aggregates of isolated learning activities do not always provide complete learning. Reflection is suited to uncovering learning that lies between contexts, especially when there is a diversity of approaches to learning. For example, for students to benefit from both formal HE and informal community-based learning, reflection can help them break down learning experiences, refine their thinking, and identify the core skills and knowledge they have acquired.

Double loop learning is an advanced form of reflection, helping students to integrate a more complex assortment of learning experiences. Double loop learning begins with students setting goals and making decisions in their learning, then challenging their values and assumptions, resulting in modifications to their initial goals (Argyris and Schön 1996). When encompassing several disparate learning experiences, and when applied repeatedly, double loop learning enables shifts in understanding. Students see how the individual learning activities fit into the entire learning process (Sharples et al. 2015). They discover and fill gaps in their learning. Students are also able to contrast assumptions made in one context with those formulated in another. They get a chance to synthesise both ways of thinking or gravitate to one. Reflection and double loop learning ultimately lead to autonomous learners. The integration of formal and extrainstitutional learning is highlighted in *Student scenario 3*.

While *Student scenario 3* provides one example of integrated creativity learning, complementarity is accomplished only when integration is sustained. Integration of formal and extrainstitutional learning can be

Student Scenario 3: Integration of Formal and Extraintitutional Learning

Amelia is studying occupational therapy and volunteers in a 'riding for the disabled' organisation. As part of her learning, Amelia spends 40 hours working alongside children with disabilities and those caring for the children. The extraintitutional learning context allows Amelia to practise the role of an occupational therapist. She helps the children participate in 'riding for the disabled' activities: Assessing children's performance; modifying tasks; adapting the environment; designing treatment activities. It also includes working with children who are learning engagement and performance strategies. Adaption, modification, design and development all provide opportunities for Amelia to develop skills and knowledge of creative thinking.

Critical reflection is used by Amelia to integrate her extraintitutional learning with the prior and future formal learning in her occupational therapy course. Prior formal learning has included methods of creative thinking and ideas to enhance occupational performance. Future formal learning will include strategies to implement and evaluate treatment plans. Following Amelia's reflections, further learning is facilitated by her HE teacher. All students in Amelia's class reflect, share and informally peer review the outcomes of their extraintitutional learning. The activity is designed to generate additional knowledge of creativity in occupational therapy. The students and teacher utilise critical reflection and connected learning to enhance their knowledge and skills in creativity.

achieved through supportive pedagogical approaches, prudent implementation of extraintitutional contexts, and recognition of informal learning by the HE institution.

Summary: Implications for HE

The factors that deter HE students from graduating with creativity attributes are largely due to the design of courses, the rigidity of teaching practices, and institutional policies and boundaries. There is no shortage of societal support for learning creativity and HE institutions set aspirational creativity goals for graduating students. The tension resides in disparities between what universities expect of their graduates, and what is explicitly taught. Regardless of the learning context, students should be

able to combine, synthesise and accumulate the requisite abilities, skills, attitudes, behaviours, knowledge, dispositions, competencies and capabilities for their lifelong learning of creativities.

Learning ecologies, service learning, connected learning, spiral learning, critical reflection and double loop learning are available as approaches or frameworks to position the learning of creativities across formal and extrainstitutional contexts. Each approach has the potential to create complementarity between ‘value adding’ alternative learning contexts and leaning situated in HE institutions. Universities should be more open and proactive towards embedding such practices in courses, as they can enhance students’ creativity attributes in unseen and unique ways. It is therefore recommended that HE acknowledges and validates complementary contexts that support and enhance students’ learning of creativities.

References

- Argyris, C., & Schön, D. A. (1996). *Organisational Learning II: Theory, Method and Practice*. Reading: Addison-Wesley.
- Bakhshi, H., Downing, J., Osborne, M., & Schneider, P. (2017). *The Future of Skills: Employment in 2030*. London: Pearson and Nesta.
- Bledsoe, J. C., & Khatena, J. (1973). Factor Analytic Study of Something About Myself. *Psychological Reports*, 32(3c), 1176–1178.
- Block, D., & Lindeke, L. (2013). Intersecting Civic Engagement with Distance Education. In H. E. Fitzgerald & J. Primavera (Eds.), *Going Public: Civic and Community Engagement* (pp. 71–82). East Lansing: Michigan State University Press.
- Brew, J. M. (1946). *Informal Education: Adventures and Reflections*. London: Faber & Faber Limited.
- Bridgstock, R. (2013). Not a Dirty Word: Arts Entrepreneurship and Higher Education. *Arts and Humanities in Higher Education*, 12(2–3), 122–137.
- Brown, J. S. (2006). New Learning Environments for the 21st Century: Exploring the Edge. *Change: The Magazine of Higher Learning*, 38(5), 18–24.
- Chandra, V. & Tangen, D. J. (2018). Demonstration of 21st Century Skills Through an ICT Teaching Problem: Experiences of Preservice Teachers in a Fijian Classroom. In T. Gray, T. Downey & M. Singh (Eds.) *The Globalisation*

of Higher Education – Developing Internationalised Education in Research and Practice. Sydney: Palgrave Macmillan.

- Cross, J. (2010). “They Had People Called Professors...!” Changing Worlds of Learning: Strengthening Informal Learning in Formal Institutions? In U.-D. Ehlers & D. Schneckenberg (Eds.), *Changing Cultures in Higher Education* (pp. 43–54). New York: Springer.
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative Learning Environments in Education-A Systematic Literature Review. *Thinking Skills and Creativity*, 8, 80–91.
- Deakin Crick, R., & Goldspink, C. (2014). Learner Dispositions, Self-Theories and Student Engagement. *British Journal of Educational Studies*, 62(1), 19–35.
- Dewey, J. (1938). *Experience and Education: The Kappa Delta Phi Lecture Series*. Toronto: Collier Books.
- Donleavy, G. (2012). Proclaimed Graduate Attributes of Australian Universities: Patterns, Problems and Prospects. *Quality Assurance in Education*, 20(4), 341–356.
- Elisondo, R., Donolo, D., & Rinaudo, M. C. (2013). The Unexpected and Education: Curriculums for Creativity. *Creative Education*, 4(12B special issue), 11–15.
- Ellis, R., & Goodyear, P. (2010). Expanding Conceptions of Study, Context and Educational Design. In R. Sharpe, H. Beetham, & S. d. Freitas (Eds.), *Rethinking Learning for a Digital Age: How Learners Are Shaping Their Own Experiences* (pp. 100–113). New York: Routledge.
- Ellsworth, E. (2005). *Places of Learning: Media, Architecture, Pedagogy*. New York: Routledge.
- Foundation for Young Australians. (2016). The New Basics: Big Data Reveals the Skills Young People Need for the New Work Order. Retrieved from http://www.fya.org.au/wp-content/uploads/2016/04/The-New-Basics_Web_Final.pdf
- Gaspar, D., & Mabic, M. (2015). Creativity in Higher Education. *Universal Journal of Educational Research*, 3(9), 598–605.
- Harris, A. (2017). Creative Ecologies: Fostering Creativity in Secondary Schools. Retrieved from <http://creativeresearchhub.com>
- Hervani, A., & Helms, M. M. (2004). Increasing Creativity in Economics: The Service Learning Project. *Journal of Education for Business*, 79(5), 267–274.
- Hockings, C. (2011). Hearing Voices, Creating Spaces: The Craft of the ‘Artisan Teacher’ in a Mass Higher Education System. *Critical Studies in Education*, 52(2), 191–205.

- Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K... Watkins, S. C. (2013). *Connected Learning: An Agenda for Research and Design*. Retrieved from <http://eprints.lse.ac.uk/48114/>
- Jackson, N. (2016a). *Developing the Idea of Learning Ecologies and Ecosystems for Learning in Higher Education*. Paper Presented at Educational Climate Change: Exploring Our Learning Environments, Dublin Institute of Technology, Ireland. Retrieved from http://www.normanjackson.co.uk/uploads/1/0/8/4/10842717/dit_handout_final.pdf
- Jackson, N. (2016b). *Exploring Learning Ecologies*. Milton Keynes: Chalk Mountain.
- Jahnke, I., Haertel, T., & Wildt, J. (2015). Teachers' Conceptions of Student Creativity in Higher Education. *Innovations in Education and Teaching International*, 54(1), 87–95.
- Kazerounian, K., & Foley, S. (2007). Barriers to Creativity in Engineering Education: A Study of Instructors and Students Perceptions. *Journal of Mechanical Design*, 129(7), 761–768.
- Kim, K. H. (2011). The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking. *Creativity Research Journal*, 23(4), 285–295.
- Kolb, D. A. (2014). *Experiential Learning: Experience as the Source of Learning and Development*. Upper Saddle River: FT Press.
- Kolb, A. Y., & Kolb, D. A. (2005). Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education. *Academy of Management Learning & Education*, 4(2), 193–212.
- Lin, Y.-S. (2011). Fostering Creativity Through Education – A Conceptual Framework of Creative Pedagogy. *Creative Education*, 2(03), 149–155.
- Livingston, L. (2010). Teaching Creativity in Higher Education. *Arts Education Policy Review*, 111(2), 59–62.
- Marquis, E., & Henderson, J. A. (2015). Teaching Creativity Across Disciplines at Ontario Universities. *The Canadian Journal of Higher Education*, 45(1), 148–166.
- McWilliam, E., & Taylor, P. G. (2016). Two Cheers for STEM; Three Cheers for Creativity. *Access (Online)*, 30(1), 28–35.
- Norton, A. (2013). The Unbundling and Re-bundling of Higher Education. Retrieved from https://grattan.edu.au/wp-content/uploads/2014/05/905_norton_alliance_21.pdf
- Philip, R. L. (2015). *Caught in the Headlights: Designing for Creative Learning and Teaching in Higher Education* (PhD). Queensland University of Technology.

- Queensland University of Technology. (n.d.-a). Creating Positive Learning Environments. Retrieved from <https://www.qut.edu.au/study/unit?unit=EDB170>
- Queensland University of Technology. (n.d.-b). Real World Learning 2020 Vision. Retrieved from <https://www.qut.edu.au/about/strategic-ambitions/real-world-learning-2020-vision>
- Runco, M. A. (2014). *Creativity: Theories and Themes: Research, Development, and Practice*. London: Elsevier.
- Sandaran, S. C. (2012). Service Learning: Transforming Students, Communities and Universities. *Procedia-Social and Behavioral Sciences*, 66, 380–390.
- Sandlin, J. A., O'Malley, M. P., & Burdick, J. (2011). Mapping the Complexity of Public Pedagogy Scholarship 1894–2010. *Review of Educational Research*, 81(3), 338–375.
- Sharples, M., Adams, A., Alozie, N., Ferguson, R., FitzGerald, E., Gaved, M.... Rienties, B. (2015). *Innovating Pedagogy 2015: Open University Innovation Report 4*. Retrieved from <http://oro.open.ac.uk/45319/>
- Sinek, S. (2009). *Start with Why: How Great Leaders Inspire Everyone to Take Action*. New York: Penguin.
- Soria, K. M., & Weiner, B. (2013). A “Virtual Fieldtrip”: Service Learning in Distance Education Technical Writing Courses. *Journal of Technical Writing and Communication*, 43(2), 181–200.
- Southern Cross University. (n.d.-a). Graduate Attributes. Retrieved from <https://www.scu.edu.au/staff/teaching-and-learning/graduate-attributes/>
- Southern Cross University. (n.d.-b). Professional Experience I: Becoming a Teacher. Retrieved from <https://www.scu.edu.au/study-at-scu/units/tch10014/2018/>
- Stephenson, J., & Yorke, M. (2013). *Capability and Quality in Higher Education*. New York: Routledge.
- Victoria University. (n.d.). Specialisation Assessment and Reporting. Retrieved from <https://www.vu.edu.au/units/ETS5005>
- Zelenko, O., & Bridgstock, R. (2014). Developing Agency in the Creative Career: A Design-Based Framework for Work Integrated Learning. In G. Hearn, R. Bridgstock, B. Goldsmith, & J. Rodgers (Eds.), *Creative Work Beyond the Creative Industries: Innovation, Employment and Education* (pp. 211–225). Cheltenham: Edward Elgar Publishing.

Part II

Partnerships



6

Creative Partnerships: Exploring Encounters in the Contact Zone

Donna Mathewson Mitchell

Introduction: Creative Partnerships

The term creative partnership is used in increasing frequency, yet to define creative partnerships is a challenging task. As Ellison (2015) observes, there is little academic research into what partnership means and a lack of coherence in how the term is used and understood. For the purposes of this chapter, creative partnerships are understood to be partnerships that result in, or focus on, creative output. Partnership work generally involves two or more organisations and/or individuals, requiring interest and investment by all parties and reasons for collaboration that have value to each partner. Ellison (2015) further suggests consensus that there are three underlying principles at the heart of successful partnering, with these being: equity, transparency and mutual benefit. However, while partnerships are generally developed for specific purposes, the act of partnering does not necessarily mean that partners share

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the same vision, ideas and goals, or that their respective structures, capacities and limitations are commensurate. Likewise, the focus of partnerships can bring together disparate groups and individuals creating points of contact where there can be small or significant differences. These differences can have significant implications for implementation, reporting and development. At the same time, differences also open up exciting spaces for creativity.

In examining partnerships that involve difference, this paper showcases a creative partnership between a university, local secondary schools and a cultural institution. The investigation focuses on Bathurst as one particular regional location, but will examine implications well beyond this community. To set the scene, Bathurst is located in the Central West of NSW in Australia. It is a regional city with a population of approximately 41,000 (Australian Bureau of Statistics 2016). Bathurst is known as an educational centre, being home to a university campus and a number of public and private schools, including boarding schools that draw from surrounding rural areas. In addition, Bathurst boasts a number of cultural institutions and a vibrant cultural life. As a regional centre, Bathurst provides a productive site for investigating the nexus between education, research and culture beyond metropolitan centres.

As noted, partnership projects are founded on collaboration and contribution. In the example here, collaboration was in its infancy and arrangements and agreements around respective contributions were largely informal and predicated on integrity and honesty. These conditions of fluidity created spaces and instances where difference had to be negotiated, allowing for degrees of creativity in ideas, approaches and implementation as well as in terms of output. Elements of difference and creativity allowed each partner to contribute in ways that authentically reflected their investment and changing expectations, enabling the project to alter and adapt as new knowledge was created and new understandings built. While these aspects of partnership work were implicitly acknowledged, in looking back we realised that our interest at the time was narrowly focused on prescribed outcomes, so little attention was paid to how the partnership evolved. In this chapter, focus is extended to ask, how can we examine the work of collaboration and the relationship of that work to creativity and difference?

To answer this question, the partnership will be examined using the concept of contact zones as a theoretical resource. First, creative partnerships are examined to provide background context. The concept of contact zones is then traced, exploring the value of this concept as a theoretical resource. Following this, contact zone theorisation is used to investigate the challenges of developing and maintaining a local collaboration. The possibilities of creative thinking, emergent approaches and collaboration are examined in the context of contact zones that come into play and need to be negotiated as collaborators encounter each other and new ideas in the development of partnership projects. Finally, implications are examined with a focus on enabling creativity within increasingly determined educational contexts.

Creative Partnerships as Encounters

The focus of this chapter is on creative partnerships between higher education, schools and cultural organisations as specific partners. In such work, cultural material provides a central focus. Lewincamp and Sloggett (2016, p. 10) note that: “the use of cultural material as a starting point encourage(s) object-based conversations that can engage people from disparate backgrounds and disparate interests to increase communication and enhance knowledge”. There is a long tradition of partnership work between museums, schools and universities and over the past 70 years or so there has been an observed and growing ‘drive to partner’ (Bonacchi and Willcocks 2016, p. 7 citing Doeser 2015). Ellison (2015) has noted that for cultural institutions, partnership has become a necessity for survival with new roles of partnership brokers and partnership liaisons emerging in recognition of the important human work involved in partnering. However, as Maloney and Hill (2016) point out, scholarship in this area tends to focus on presenting singular projects with little exploration of the ways in which partnership work transforms organisations. The authors call for the sharing of partnership models that demonstrate ways of partnering.

The arts provide a particularly strong entry point for partnership work. As Bowen et al. (2014) state, the arts animate learning because they are

inherently experiential and because of their potential to connect to human history, develop creativity and build capacity for critical thinking. Through the exploration of such connections, the arts often intersect with community engagement and education with a focus on experience and social impact, in ways that cannot always be predicted or anticipated. Examples of such approaches are reported in a recent publication edited by my colleague, Kim Snepvangers and I (Snepvangers and Mathewson Mitchell 2018). Across these examples, we noted a strong base in social justice and the process of empowerment, with partnerships aiming to build the capacity of local people to respond to educational and structural disadvantage and to participate in decision making and policy creation. In this way the partnerships provided rich encounters that then impacted on cultural ecologies and histories of local places, often in unanticipated ways.

Thinking about partnerships as ‘encounters’ (Snepvangers and Mathewson Mitchell 2018) allows a re-consideration of creative partnerships as community connectivity in relation to both predictable and unpredictable experiences and outcomes. It conceives contingency, chance elements and relational dialogues as new experiences that have particular educational and transformative value. Once recognised as part of partnership work, the concept of ‘encounters’ provides a space for considering the very nature of creative partnerships themselves. As intimated earlier, much of the literature provides exemplars of creative partnerships focused on specific singular projects (see for example Grant and Patterson 2016; Wishart and Triggs 2010), while relatively little discussion focuses on the encounters and encountering that occurs in partnering or the structures in which those encounters occur (Bonacchi and Willcocks 2016).

Craft et al. (2012) provide a valuable account of a research-focused creative partnership to address the nature of partnership work. The English-based partnership, named Dance Partners for Creativity (DPC) involved dance artists, teachers and students aged 11–14 in co-enquiry, exploring how creativity developed through creative partnership. Enquiry was particularly concerned with the investigative space between creativity and performativity (Ball 2003) recognising that performativity can be in tension with creativity (Craft and Jeffrey 2008; Thomson et al. 2009). A

project-based website enabled transparency at each stage and allowed for transferability, recognising that “Ethics were close to the surface. Confidentiality and visibility were in tension at times, each partner bringing unique and situated views on what might count as ‘good’ research” (2012, p. 584). Sensitivities around overlapping and shifting roles and the ways in which the partnership may evolve were noted and the authors emphasised the importance of reciprocal, active conversations signalling co-participation. McWilliam’s (2008, p. 265) concept of ‘meddling in the middle’ was applied to this partnership work, with meddling in the middle seen as a productive form of reflective practice recognising that partnerships are dynamic and sometimes uncomfortable, offering potential for change. The ‘meddler’ here “notices with care, compassion and interest what seems to be important to the learners” (Craft et al. 2012, p. 586). Applied to the partnership, the authors recognised the role of uncertainty and not-knowing; acknowledging the vital role of risk-taking; entering in to designing, assembling and editing together alongside core researchers; and, actively co-engaging as evaluator and critic in collaboration with core researchers. Co-exploration and reflection allowed for discussion and interrogation emphasising that, “There is a vital role for co-designed journeys rather than responding to marching orders, in an era of uncertainty and change” (2012, p. 593). Importantly the authors note that there were tensions here between schools who felt they had to know journey and destination and external partners who were more willing to be spontaneous, adaptable and responsive. This showed that approaches and motivations were nested in everyday working environments and requirements and there were counterpoised uncertainties and difficulties.

An Example of a Local Partnership

The creative partnership being examined in this chapter was examined through research in similar ways to the example just discussed. Partners in *Generation Art* were: Bathurst Regional Art Gallery (BRAG), Australian Catholic University (ACU), local artists and local secondary schools with BRAG and ACU being the central partners. The partnership began in 2015 with the project implemented in 2016. The project involved a

14-week education programme in which local Year 10 school students engaged with the art gallery and with local artists with a focus on learning about visual arts and the role of the art gallery. The culmination of the programme involved the collaborative development of digital stories designed to communicate with youth audiences. Action research informed the programme and allowed for the exploration of the partnership as it evolved.

BRAG provided the site and focus for the programme. The programme itself targeted youth audiences which was a particular issue for the gallery and facilitated connections with schools as part of the local community. ACU provided the initial idea, the theoretical underpinning and the research aspect of the programme. Local schools nominated students in Year 10 and supported the programme. Local artists acted as mentors in the programme and provided exemplars of artist practice.

One person representing BRAG and ACU respectively led the project. These two individuals (one of which was me) met each month throughout 2015 with a focus on planning and development. The programme was implemented in 2016 after 18 months of discussion and planning. In this way the partnership developed slowly and over time. All of the planning, development and implementation was tracked with a focus on evaluating the project and the partnership work.

Contact Zones as Spaces of Difference

The examples that have been provided illustrate partnership work. In all cases, partners come from different organisations and are positioned differently. As a consequence of this positioning, partners come to projects with different backgrounds, experiences, ideas and aims. In the context of the partnership they have to negotiate these differences in collaborative ways to develop projects and ideas of mutual benefit. It can be argued that this work occurs in the 'contact zone'. A 'contact zone' is a space where difference comes into contact. Action that happens in this contact zone can seek to negotiate and resolve differences or to hold differences as unique and distinct, finding spaces for all to co-exist.

The idea of ‘contact zones’ as social spaces where different cultures meet and as sites of encounters where power is negotiated was introduced by Mary Louise Pratt in 1991. Pratt defined the contact zone as a:

term to refer to social spaces where cultures meet, clash and grapple with each other, often in contexts of highly asymmetrical relations of power such as colonialism, slavery, or their aftermaths, as they are lived out in many parts of the world today. (1991, pp. 3–4)

The contact zone was also described by Pratt as a zone of “possibilities and perils” (1991, p. 4). In this she was acknowledging unequal spaces where dominant cultures would often provide the conditions and structures for cultural exchanges and transactions. The two-way dialogue is acknowledged but it is viewed as one-sided.

More recently Somerville (2014) has utilised ‘contact zones’ to theorise different kinds of collaboration. She views contact zones as related to space and place and as spaces of unknowing, where imagination allows us to create anew. Somerville talks of place in terms of specific local place and proposes a framework for a critical pedagogy of place. She suggests three elements: (1) our relationship to place is constituted in stories (and other representations); (2) the body is at the centre of our experience of place; and (3) place is a contact zone of human contact (2010, p. 335). Story is viewed as a basic unit of meaning making and it can be oral, visual, performative. There are dominant storylines associated with particular places but there are a multiplicity of stories and other stories that can be uncovered. Place learning is embodied and local with places offering a physical and metaphysical ‘in-between’ space for the intersection of contested stories. A methodology for place pedagogy requires multiple forms of representations of place, embodiment of experience and multiple stories. In drawing on Gruenewald’s (2003) concepts it involves undoing dominant stories of place (decolonisation) and the making of new place-stories (re-inhabitation) in ways that are local and responsive, emerging as the body engages with materiality of place and the representation of story. Representations provide ways of knowing place differently.

To relate Somerville's application of place pedagogies to contact zone theorising, it is important to hold different stories in productive tension. According to Carter (1992) the main function is to preserve difference. Carter sees the 'intervals of difference' (Carter 1992, p. 179) as providing for alternative possibilities with contact events providing spaces of communication where differences can be expressed. In discussing difference in contact zones, Somerville and Perkins (2003) note that many authors have focused on it requiring border work. As they note, bell hooks describes this space as "not a safe place" (hooks 1990, p. 149). It is work that takes place 'underground' (Anzaldúa 1987, p. 79) and in 'tension of the border' (Haig-Brown 2001, p. 31).

In 1997 the concept of contact zones was taken up by Clifford to problematise and foreground the role of museums in historical, political and moral exchanges. The ongoing relevance of contact theorising is evident in the 'new museology' (Vergo 1989) and the work of a number of authors (Boast 2011; MacDonald 1998; Mason 2006; Purkis 2014; Vanni 2014; Witcomb 2003), which reflects a general assertion that 20th century museums should be socially and community-focused. Weil (1990) in particular suggests that museums should be places of engagement where ideas are put forward for visitors to engage with and question, rather than being places of static displays and received wisdom. There has also been increased pressure for museum staff to interact with visitors, representing a shift from museums as places of authority and knowledge to places where projects are negotiated and defined by stakeholders (Peers and Brown 2003, p. 2) (Lewincamp and Sloggett 2016, p. 4).

In a review of the literature Lewincamp and Sloggett (2016) suggest that museum-based collaborations with communities are central to the activation of contact zones, with projects focused on bringing together communities to investigate the role and meaning of objects. As they state "This brings together academic knowledge and systems of enquiries with community knowledge and engagement to build zones of contact" (2016, p. 6) This dialogical aspect is explored by Gere (1997) and later, Boast (2011, p. 58) who assert that museums act as a dialogical space, as more than a one-way medium, embracing reciprocity and the idea of networks. This is a reimagining of the museum (Witcomb 2003) that recognises

that visitors do not come into museums as blank slates and reclaims the ground of museum as a mediator between cultures- a space of collaboration, discussion and conflict resolution. It acknowledges stakeholders and community, which is a major justification of relevance.

However, despite these ideals, there is criticism of the concept of the contact zone. Boast (2011) argues that despite espoused transformations, museums continue to control the voices of museum presentations for a relatively narrow, selective view of public interest. Like Bennett (1995), he is critical of the concept of the contact zone, seeing the contact zone as an extension of governmentality and power, projecting the goals of the elite who tend to talk for those who have less power. In doing this, Boast argues that museum approaches forget the importance of auto-ethnography as an aspect of Pratt's notion of the contact zone. In this discussion Boast questions whether contact zones have worked and if they are spaces of equal reciprocity and mutual benefit, stating "They are, despite the best efforts....asymmetric spaces of appropriation...they remain sites where the Others come to perform for us, not with us" (2011. p. 63). As Boast suggests, museums still position the Other and they remain in control of the collaboration (Bennett 1995; Hilden and Huhndorf 1999; Lonetree 2006). This is not a matter of what museums intend but is the nature of the institution and is built into funding, practice, roles of collecting, preserving, documenting and displaying.

Boast is suggesting that it is the auto-ethnographic within contact zone theorising that offers self-representations to undermine dominance. Auto-ethnography seeks not to suppress difference but to allow multiple stories to be told from the perspective of all partners. In this way, Boast's suggestions link with Somerville's pedagogies of place, seeing collaborations as requiring participation in a contact zone where we refuse easy answers, confront difficult questions, move out of comfort zones. As Somerville has noted in her reflections on collaboration "Much of the essential work of collaboration involved moving between, and across boundaries" (Somerville 2010, pp. 338–339).

This literature review has focused on creative partnerships and contact zones, with a focus on how contact zones operate in the particular spaces of museums and galleries as cultural sites. While there are clear examples and discussions of how cultural sites can act as contact zone, there is also

a critical body of literature that questions the realities of this work in terms of telling multiple stories, representations and connections to place.

Case Study: Generation Art

We will now return to the case study example presented earlier in this chapter. In picking up on the ideas presented in the literature review, we will examine this case study in relation to partnerships, contact zone and pedagogies of place. The partnership will be analysed through discussion and using vignettes and quotes extracted from my research diary as a form of auto-ethnography.

The *Generation Art* partnership originated in higher education and encompassed an art gallery and its artefacts as a particular site. The focus was on connecting higher education with cultural organisations and schools, in relation to local place. In *Generation Art* a contact zone occurred where the partners involved came together. When partners initially met the focus was on an idea, but of course the body was deeply part of this meeting which came about through human contact. The initial idea was a story, a representation, brought to the table by one of the partners with a focus on creating mutual interest in an intellectual and cultural contact zone. The story was then worked with in a collaborative and dialogical space and in the physical space of BRAG as a gallery connected to place, and as that occurred the idea changed and morphed. In this way the project brought together academic knowledge with community knowledge and engagement to build zones of contact. As we worked with the idea we explored the perspectives of both organisations, engaging in what Somerville and Perkins would term 'border work' relating the idea to the concerns of each partner. Relationships of trust were developed in an ongoing way, with dialogue creating the opportunity to learn about one another and to find the spaces in which collaboration could occur. In a practical sense, meetings were scheduled on a monthly basis to ensure this ongoing dialogue and while they generally lasted for an hour, at times they extended beyond until particular problems or parts of the project were addressed. This did not necessarily mean resolution or

compromise but was focused on enabling everyone's ideas to co-exist in ways that supported the aims of the project, in Carter's terms, in 'productive tension' (1992, p. 179). Other partners were engaged in this dialogue as required at different points in the planning, creating a further network.

Borders between the partners were crossed as initial ideas were questioned and probed in terms of viability for each partner. Ideas were altered and plans for the project changed to reflect different interests and ideas. Each partner recognised their different positioning and particular attention was paid to explaining perspectives and listening and understanding the others viewpoint. Documentation was crucial to this process with discussions documented so there was a running history and transparency which could then be cross-checked. Importantly this process involved moments where each partner was placed in the 'discomfort zone' (Somerville and Perkins 2003, p. 261). For example, the requirement of a university ethics application to undertake research as part of the project created some tensions between partners, particularly jeopardising developing networks with schools. This is evident in the following excerpt from my research diary:

Ethics is a very long process and the timing is problematic when trying to fit within everyone's timeframes. Following the formal ethics process and providing information and gaining consent is also problematic. School principals in particular are busy and don't have time or are not interested. It's very difficult to get in touch with teachers and students before the program and they don't see the point of ethics forms. It is a process of constant apology and explanation, tiresome but necessary.

Ethics clearance took three months. To BRAG, ethics was an unknown process that created another level of administration with the protocols potentially constraining the project and putting pressure on time and available workload in terms of the attention needed to complete the process. Dealing with how to manage this application and how to address some of the more difficult and unanticipated questions created a space where difficulty and difference could be explored. For example, much time was spent discussing issues relating to storage of personal information,

confidentiality and anonymity of participants. As Somerville and Perkins (2003) note, navigating these external requirements was both intellectual and emotional work. The research diary reflects this:

Putting in place protocols for collecting data that is de-identified and ensuring participant information is stored in ways that are accessible when needed, yet in-line with ethics procedures is tricky. These discussions take time and need to constantly be re-visited. For BRAG it is a different way of thinking about practices.

The borders and the work we do depends on our positioning in the contact zone (Somerville and Perkins 2003, p. 264). In this project, positioning was explicitly addressed early in the collaboration. Each partner identified their interest and their expertise and the project itself was divided into two parts, with each partner effectively leading a respective part aligned with organisational priorities. For BRAG that involved a focus on the education programming, while for ACU it involved a focus on research. This delineation was explained in my research diary. A pseudonym has been used:

Jobs were delegated with a focus on playing to our strengths and aligning with our institutional focus. I will focus on research, completing field observations while the program occurs and collecting responses at the end of each week. I will analyse weekly data and present that each week to allow for adaptation. Jane will lead the education programming, presenting artworks, discussing them and generally providing access to the collection.

As the programme progressed and we became more aware of what needed to be done, our roles became more defined and our positioning altered. The ability to define roles more clearly as the programme developed is reflective of the fact that at the beginning we were in a space of what Somerville (2014) has termed 'unknowing' and what Craft et al. (2012) explained as 'uncertainty' At the end of the programme, as we developed our knowledge, the roles were defined as:

- Jane: developing weekly plans, presenting artworks, discussing artworks, providing access to the collection via information & images, guiding use of technology, liaising with mentor artists. monitoring student progress
- Donna: field observations, development of research instruments, analysis, consultation re the education programming, input based on field observations and analysis.

Sometimes maintaining this positioning was problematic. For example, as a researcher my focus was on recording observations of the programmes as it progressed. However, as an educator, I often saw opportunities to intervene and facilitate. In this way I became like a ‘meddler in the middle’ (Craft et al. 2012). There were many moments in which I had to engage in self-reflection to consider the appropriateness of such action, to the research project and to the positioning of each of the leaders. On one occasion, the week had been very busy at BRAG and Jane had not had a chance to send me the pre planning document that we normally shared, so I was unsure of how the workshop would run. This made it difficult for me to prepare a response question for the end of the workshop as part of our weekly data collection. There was also an instance where Jane was running late to a workshop, for good reason, and I had to start the workshop off. My concerns at these points were articulated in my research diary:

I have a feeling that communication is not as effective as it could be. I feel a bit of tension around my role that may need to be clarified. Do I step back from planning or running the workshops or do I need to do more of this to take pressure off Jane?

This example illustrates some of challenges in working in the contact zone. It was addressed by raising this as a concern in the weekly meeting and engaging in a ‘re-mapping’ of the spaces and work of the contact zone to clarify roles. However, there were still difficulties in maintaining these positions:

There is a tendency to program tightly which is good for momentum but does not allow for kind of responsiveness, flexibility and exploration that I tend to encourage. I gently suggested alternative approaches, in softer ways, outside of the workshops, but I did so tentatively and in the knowledge that while I know about student learning, I am not the expert in the gallery setting. Jane was receptive to this and thank fully was not concerned by my suggestions. There is an openness and a sense of learning from one another.

Jane ran the sculpture week very well. I did not intervene, although at times I wanted to. Watching Jane reminded me of the need to guide students to the answers rather than tell 'the story'- this is a crucial difference in approaches.

Differences in how each partner worked, how communication occurred and the vulnerability of not knowing were acknowledged. For example, in developing the ethics application already mentioned and developing a funding application for an arts organisation there was a need to share and explain different uses of language and ways of explaining projects. This involved disclosing knowledge without assumptions and asking questions that involved possible shame and ignorance. For example, while I was concerned with exploring the notion of cultural competence from a Bourdieuan point of view, Jane was concerned with the concept of cultural impact, the creative class and new economies, drawing on the work of Richard Florida (2002). These interests reflected completely different and unfamiliar approaches. Understanding those approaches required the development of knowledge through discussion and in our cases, through sharing readings that could provide background. The process of disclosure and questioning also allowed each partner to reflect on their own positioning in their organisation and the ways in which their involvement in the partnership was determined by organisational imperatives or entrenched ways of working. This sometimes then led to questioning some of the practices that constrained the project. For example, for BRAG there was an initial focus on gathering qualitative data that was seen to be of value for their reporting requirements. This had to be balanced with the reality that this would be a relatively small study, with a small number of participants. As a consequence, there was a questioning of the focus on numerical measures and a re-focus on qualitative measures as more appropriate to the purposes and the nature of this study.

In *Generation Art* the contact zone can be seen as space of productive tension based on a valuing of difference rather than hybridity. The identity of each organisation and individual remained. But it was also a place of shifting boundaries, border work and complex border crossings that led to significant learnings often occurring in the discomfort zone. Learning in turn both required and allowed for the negotiation of creative changes in the project planning, during the programme and in future iterations, that sought to represent partners. This meant that the project itself emerged differently than first anticipated and something new, original and authentically collaborative developed. Here is a final vignette, based on field observations, to illustrate:

We are in the storage area of the gallery, out the back among the stacks of paintings, drawings and prints. We have looked at wonderful examples of works in the permanent collections, including local artists and very well-known Australian artists, like Russell Drysdale, Brett Whiteley, Donald Friend. We have assumed students would know these names, but they look blank when Jane mentions the names. I tentatively intervene and say, “These are well-known artists. When you go back to your schools and your classrooms, you can look them up in your art books and you’ll find books in the library about these artists.” Some of the students nod to indicate that they may do this. But one group of students, look at each other oddly. Afterward I quietly revisit this with them and they tell me they don’t use books in their classroom, rather their teacher gives them worksheets on the artists they look at in class and they have no opportunity to explore other artists. One of the girls says “I never thought about using books in art”.

This example was one that Jane and I talked about a lot about in the week following. It demonstrated to us that we had based our thinking about schools, art education and student experiences on assumptions about what we thought students had access to and their broader knowledge. In this case, these assumptions were incorrect and we had thus positioned students incorrectly. Their experience was another factor we needed to consider in more depth and through greater collaboration with schools and teachers to ensure that representations in the contact zone more genuinely reflected the stories that student-participants brought forth into that space.

Dilemmas in the Contact Zone

To conclude the examination of this particular case, a dilemma related to this particular project that highlights some of the challenging aspects of partnership work will now be examined. In developing a research methodology and a plan for undertaking the research aspects of *Generation Art*, a number of research questions were developed. These research questions were driven by the literature review and my own positioning as a qualitative researcher with an interest in practice. Initially I started with 3 research questions related to youth audiences and museums and galleries. In presenting these questions and discussing them with BRAG, it was clear that the questions adhered to ideas about 'good' qualitative research and the Bourdieuan approach I mentioned earlier but did not fully reflect the questions BRAG wanted to ask with their focus on cultural impact. Their language was different and their interest was firmly related to social impact and the creation of cultural learners. Rather than trying to synthesise these interests a decision was made to extend the number of research questions, so that the interests of both partners could be addressed. The number of questions expanded dramatically until they were eventually reduced to 6. This process reflected work in the contact zone to enable ideas and imperatives to co-exist. There was a focus here on ensuring one voice did not dominate and while we did not understand this at the time, we engaged the auto-ethnographic aspect of the contact zone (Boast 2011) to allow each partner to speak for themselves.

A dilemma has now occurred as the research has been disseminated. In a recent draft manuscript submitted to an education journal an overview of the research was provided. An academic reviewer, viewing the research from a particular position, has questioned the number of research questions and the scope of the research on the basis of 'good quality' academic research. This has raised issues related specifically to the development of research questions and more broadly about the process involved in representing partner interests. It has further raised questions about the positioning of those who are external to the partnership and who were not part of work that occurred in the contact zone and the question of how they might engage with the outcomes This points to a problem of representation that is not a new one and issues of representation are not

confined to partnership work. Such issues have been documented in a range of anthropological and ethnographic studies (Brettell 1996; Coles and Thomson 2015; White and Strohm 2014). Identifications of issues of representation signal the importance of not only understanding the negotiated aspects of the partnership and the experience of the contact zone but of being able to represent partnership work and its outcomes within and beyond the space and place of the partnership. It suggests that a broader community needs to be considered and connected with as part of the thinking and planning of the partnership work. Such a discussion is beyond the scope of this paper, but of crucial importance in locating the importance of partnership work as part of a broader cultural ecology of practice.

Implications for Partnerships

While the example I have talked about is local and place-based, when examined using the concept of the contact zone it has implications for informing creative partnerships beyond this instance. Lewincamp and Sloggett (2016, pp. 6–7) define contact zones as different zones that progress as community collaborations develop. Their conceptualisation of movement between different zones as physical and conceptual spaces reflects movement that is evident in the example provided. An initial landing zone is first contact when the reason for partnering becomes apparent. The early exploration zone involves early introductions & introductory work where shared goals and guiding principles are developed. Then there is the collaboration zone which is denoted by joint programmes and participation. The transfer of knowledge zone occurs when the programme reaches maturity, outcomes are assessed and new opportunities are identified. Movement between these zones is not always linear and relationships are constantly evolving with ongoing movement and changes in participants influencing zone progression and collaborative interactions.

The transfer of knowledge zone is the area that has been shown to be a particular issue in terms of external relations and dissemination of outcomes. The dilemma discussed suggests a need to think about engage-

ment beyond the contact zone and how others may come to understand it. This requires documentation of the partnership, writing about the partnership and helping others to see the contact zone as a space where difference can and will exist. Disclosing this work will enable us to move from assumptions that partnerships are seamless, uncontested and focused on outcomes to also value processes that may involve discomfort and difficulties to motivate and facilitate future partnership work.

Conclusion

In terms of higher education, schools and cultural organisations, partnerships that have a central focus of interest to all are vehicles for making connections beyond traditional disciplinary boundaries and engaging community. They are also powerful vehicles for creative output. However, not all partnerships achieve these aims and we rarely hear of those examples. Likewise, of those that are successful and are written about, we hear relatively little about the actual work of the partnership that leads to success or facilitates future work. Even more rare are discussions of the discomfort or difficulties that occur during partnership work.

This chapter has sought to examine the often undisclosed and unexamined nature of partnerships in terms of how they develop and evolve as outcomes are achieved. In using the concept of the contact zone to examine the physical and intellectual spaces in which partners meet, the discussion has focused on how creative thinking, emergent approaches and collaboration come into play in those contact zones. In thinking about partnership work as encompassing encounters in the contact zone, it has questioned how partnerships are constantly and creatively negotiated in the development of partnership projects. An example has been used to illustrate these ideas in practice and to show how two partners negotiated a particular project. The example that has been examined was a successful one with positive outcomes and a continuing life beyond the initial project. The partnership is continuing and changing in its focus as partners work together.

Central to the discussion has been the notion of creativity in the contact zone and we have tried to understand these encounters in relation to place. Partnerships engage people and ideas in the creation of something new related to particular places and spaces. They further engage people in

creative processes that transform one's relationship to the world, creating representations that speak to that story. This is important engagement work that Onciul (2013, p. 84) describes as "temporary, movable, flexible, living sphere(s) of exchange that can occur spontaneously or be strategically planned". Understanding how this happens and under what conditions is critical to facilitating creative partnerships that are successful and sustainable.

References

- Anzaldúa, G. (1987). *Borderlands: La Frontera – The New Mestiza*. San Francisco: Spinsters/Aunt Lute.
- Australian Bureau of Statistics. (2016). 2016 Census Quick Stats: Bathurst Regional (A). Retrieved from: http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/LGA10470?opendocument
- Ball, S. J. (2003). The Teacher's Soul and the Terrors of Performativity. *Journal of Education Policy*, 18(2), 215–228.
- Bennett, T. (1995). *The Birth of the Museum*. London: Routledge.
- Boast, R. (2011). Neocolonial Collaboration: Museum as Contact Zone Revisited. *Museum Anthropology*, 34(1), 56–70.
- Bonacchi, C., & Willcocks, J. (2016). *Realities and Impacts of Museum-University Partnerships in England. A Report for the Museum University Partnership Initiative*. England: Arts Council of England. https://www.publicengagement.ac.uk/sites/default/files/publication/mupi_literature_review_and_research_report.pdf
- Bowen, D. H., Greene, J. P., & Kisida, B. (2014). Learning to Think Critically: A Visual Art Experiment. *Educational Researcher*, 42(1), 37–44.
- Brettell, C. B. (Ed.). (1996). *When They Read What We Write: The Politics of Ethnography*. London: Bergin & Garvey.
- Carter, P. (1992). *Living in a New Country: History, Travelling and Language*. London: Faber and Faber.
- Clifford, J. (1997). Museums as Contact Zones. In J. Clifford (Ed.), *Routes: Travel and Translation in the Late Twentieth Century* (pp. 188–219). Cambridge: Harvard University Press.
- Coles, R., & Thomson, P. (2015). Beyond Records and Representations: Inbetween Writing in Educational Ethnography. *Ethnography and Education*, October, 1–14.

- Craft, A., & Jeffrey, B. (2008). Creativity and Performativity in Teaching and Learning: Tensions, Dilemmas, Constraints, Accommodations and Synthesis. *British Educational Research Journal*, 34(5), 577–584.
- Craft, K., Chappell, K., Rolfe, L., & Jobbins, V. (2012). Reflective Creative Partnerships as ‘Meddling in the Middle’: Developing Practice. *Reflective Practice*, 13(4), 579–595.
- Doeser, J. (2015). The Drive to Partner. In J. Ellison (Ed.), *The Art of Partnering*. London: King’s College London (pp. 32–38). Retrieved from: <http://www.kcl.ac.uk/cultural/culturalenquiries/partnership/index.aspx>
- Ellison, J. (2015). *The Art of Partnering*. Kings College London. http://uk.icom.museum/wp-content/uploads/2015/12/The-Art-of-Partnering_Report_KCL.pdf
- Florida, R. (2002). Entrepreneurship, Creativity and Regional Development. Retrieved August 1, 2015, from http://www.creativeclass.com/rfcgdb/articles/Entrepreneurship_Creativity_and_Regional_Development.pdf
- Gere, C. (1997). Museums, Contact Zones and the Internet. *Archives and Museum Informatics*. Retrieved from: <http://www.archimuse.com/publishing/ichim97/gere.pdf>
- Grant, J., & Patterson, D. (2016). Innovative Arts Programs Require Innovative Partnerships: A Case Study of STEAM Partnering Between an Art Gallery and a Natural History Museum. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 89(4–5), 144–152.
- Gruenewald, D. A. (2003). The Best of Both Worlds: A Critical Pedagogy of Place. *Educational Researcher*, 32(4), 3–12.
- Haig-Brown, C. (2001). Continuing Collaborative Knowledge Production: Knowing When Where Why and How. *Journal of Intercultural Studies*, 22(1), 19–32.
- Hilden, P., & Huhndorf, S. (1999). Performing ‘Indian’ in the National Museum of the American Indian. *Social Identities*, 5(2), 161–183.
- hooks, b. (1990). *Yearning: Race, Gender and Cultural Politics*. Boston: South End Press.
- Lewincamp, S., & Sloggett, R. (2016). Connecting Objects, Communities and Cultural Knowledge. *AICCM Bulletin*, 37(1), 3–13.
- Lonetree, A. (2006). Missed Opportunities: Reflections on the NMAI. *American Indian Quarterly*, 30(3–4), 632–645.
- MacDonald, S. (Ed.). (1998). *The Politics of Display: Museums, Science, Culture*. London: Routledge.
- Maloney, B., & Hill, M. D. (2016). Museums and Universities: Partnerships with Lasting Impact. *Journal of Museum Education*, 41(4), 247–249.

- Mason, R. (2006). Culture Theory and Museum Studies. In S. MacDonald (Ed.), *A Companion to Museum Studies* (pp. 17–31). Oxford: Blackwell.
- McWilliam, E. (2008). Unlearning How to Teach. *Innovations in Education and Teaching International*, 45(3), 263–269.
- Onciul, B. (2013). Community Engagement, Curatorial Practice, and Museum Ethos in Alberta, Canada. In V. Golding & W. Modest (Eds.), *Museums and Communities: Curators, Collections and Collaboration* (pp. 79–97). London/ New York: Bloomsbury Academic.
- Peers, L., & Brown, A. (2003). Introduction. In L. Peers & A. Brown (Eds.), *Museums and Source Communities* (pp. 3–16). London: Routledge.
- Pratt, M. L. (1991). Arts of the Contact Zone. *Profession*, 91, 33–40.
- Purkis, H. (2014). Making Contact in an Exhibition Zone: Displaying Contemporary Cultural Diversity in Donegal, Ireland, Through an Installation of Visual and Material Portraits. *Museum and Society*, 11(1), 50–67.
- Snepvangers, K., & Mathewson Mitchell, D. (2018). Reflections on Transformative Pedagogies and Practice Encounters in the Cultural Sphere. In K. Snepvangers & D. Mathewson Mitchell (Eds.), *Beyond Community Engagement: Transforming Dialogues in Art, Education and the Cultural Sphere*. Champaign: Common Ground Publishing.
- Somerville, M. J. (2010). A Place Pedagogy for ‘Global Contemporaneity’. *Educational Philosophy and Theory*, 42(3), 326–344.
- Somerville, M. J. (2014). Creative Collaborations in the Contact Zone. In K. Barney (Ed.), *Collaborative Ethnomusicology: New Approaches to Music Research Between Indigenous and Non-Indigenous Australians* (pp. 9–24). Melbourne: Lyrebird Press.
- Somerville, M., & Perkins, T. (2003). Border Work in the Contact Zone: Thinking Indigenous/Non-Indigenous Collaboration Spatially. *Journal of Intercultural Studies*, 24(3), 253–266.
- Thomson, P., Jones, K., & Hall, C. (2009). *Final Report: Creative School Change Project*. London: Creative Partnerships. Retrieved from: <http://www.creative-tycul-tureeducation.org/research-impact/thematic-research/>
- Vanni, I. (2014). The Archive and the Contact Zones: The Story of Stan Loycurrie and Jack Noorywauka, Performers at the 1929 Australian Aboriginal Art Exhibition, Melbourne. *Journal of Australian Studies*, 38(3), 314–330.
- Vergo, P. (Ed.). (1989). *The New Museology*. London: Reaktion Books.
- Weil, S. E. (1990). *Rethinking the Museum and Other Meditations*. Washington: Smithsonian Institution Press.

- White, B. W., & Strohm, K. (2014). Preface: Ethnographic Knowledge and the Aporias of Intersubjectivity. *HAU: Journal of Ethnographic Theory*, 4(1), 189–197.
- Wishart, J., & Triggs, P. (2010). MuseumScouts: Exploring How Schools, Museums and Interactive Technologies Can Work Together to Support Learning. *Computers & Education*, 54(3), 669–678.
- Witcomb, A. (2003). *Re-imagining the Museum: Beyond the Mausoleum*. London: Routledge.



7

Creative Industry Encounters: Digital Ecologies in Art, Design and Media

Kim Snepvangers

Creative Ecologies

Thinking through historical and contemporary issues and mechanics of structural complexity to re-imagine new creative ecological networks, raises the visibility of previously undisclosed voices in art, design and media. Extending beyond the concept of voice to reveal the mechanics of production and consumption ensures the development of case based knowledge, care and advanced knowledge in creative professional contexts. An ecologies of practice lens (Hopwood 2016; Kemmis et al. 2012; Rourke and Snepvangers 2016; Snepvangers and Mathewson Mitchell 2018a, b), is used to explore specifically designed curricula anticipating sustainable concepts of creative learning as partnership, meshed with a well-resourced digital portal in a tertiary professional experience programme. The subject of this work is a compulsory core course, the Professional Experience Project (PEP) located in a large met-

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ropolitan research-intensive university in Sydney Australia. Given that PEP is nested within a final year Honours programme across Fine Arts, Design and Media Arts the significance of PEP as a transitional space of encounter prior to graduation into the artworld is of paramount importance. In section one of the chapter, I outline creative ecology research, then describe the metaphoric use of creative ecologies with PEP. In the second section I draw on a recently discovered occurrence of a natural “fairy circle” ecology (Getzin et al. 2016) in the remote outback of Australia to examine how that self-organising system might offer different tools and perspectives for PEP. The way that PEP has been cultivated in a formalised academic curriculum in a tertiary faculty of art and design is a stepping off zone into new understandings of creative economy.

Harris (2016, 2017, 2014) introduced the significance of creative ecological approaches and holistic understanding in developing creative and dynamic 21st century learning environment, proposing a Creativity Index and Whole School Audits. Alongside extensive global comparative research, Harris signals the importance of whole of institution creativity audits, curriculum innovation, pedagogical approaches and evaluative systems that focus on “ecosystems of knowledge transfer and behavioural development” (deBruin and Harris 2017, p. 24). Significantly, the work suggests a focus on the role of environmental perspectives in developing partnerships in creativity research and implementation through a range of interdisciplinary “network(s) of habitats” (p. 24). Networks then are perceived as sites of potentiality ‘with’ rather than ‘for’ actors, participants and stakeholders to interact, co-create and adapt to new situations. De Bruin & Harris also allude to the darker side of partnerships and stable conceptions of community noting that not all networks create environments for learning and adaptation. They develop future proofing exemplars noting that:

Creative ecologies within school systems are dynamic educational environments that through critical thinking develop and promote sustainable learning and innovation thinking and practices in our future workforces and industries. (p. 24)

Specifically, how de Bruin and Harris identify additional creative ecological thinking to Cho's three key elements of creative educational research, has high resonance with interconnectedness and dynamics of spatial relations in the educational encounters of PEP. They include the need for how "new attention to the creative ecology or field of relationships within creative schools might offer a joined-up approach to the interconnections between place, space and practices" (de Bruin and Harris 2017, p. 30). The way that Harris is applying a *creative ecological approach* signals the significance of ecologically articulated curriculum, appropriate and negotiated creative pedagogies and evaluation with the additional criterion of interdisciplinary partnerships that embrace whole of institution change. Creative ecological thinking includes the emerging importance of knowledge based networked economies and how students are "pro-sumers" rather than producers or consumers, intent on "co-opetition" instead of collaboration or competition" (ibid). These ideas about the role of educators as mentors in creatively adaptive projects, directly inform the Professional Experience Project (PEP) case study in this chapter.

What Is Meant by Creative Industry Encounters?

Harris (2017, 2016) and de Bruin and Harris (2017) highlight a renewed interest in key terms regarding creativity research, including creative economies, creative cognition and creative and cultural industries. Their focus is on addressing a gap in Australasian creativity research and education across compulsory secondary (Years 7–10) noting "Only through increased and sustainable research that bridges education and creative industries can we account for the new creative and educational practices that have emerged from the region in the last two decades" (p. 24). de Bruin and Harris's interest here is on increasing connectedness of "global (creative) workplace needs" (p. 23) in the context of compulsory schooling. By focusing on tertiary training of secondary teachers they put forward Harris's Creativity Index (2016) to address a gap in understanding, offering key additional, environmental insights to existing creativity literature. Their work has high salience with this chapter, as they use a creative ecological approach (Howkins 2009) to drive innovation in

whole-school change (Harris 2017). What is important here is that this work paves the way for thinking about creative ecologies within higher education (HE) systems as dynamic learning environments with implications for future, yet-to-be imagined workforces and industries.

Another dimension in emergent creative industry encounters is the concept of encounter as a theoretical device in contemporary discourses (Deleuze 1994; O'Sullivan 2006; Pantazis 2012). Encounters have both possibilities and consequences, specifically to unpick and unsettle traditional representational practices. Focusing on lived presence and experience as required by an encounter, allows students' access to disconfirmational material, where outcomes are not predicated on positive experiences or results. Encounter as a pedagogical device has qualities of tension, apprehension and the unknown (Snepvangers and Mathewson-Mitchell 2018a, b). Provision of access to dilemmas, diversities and unexpected experiences provides other possibilities to the passive reception of received content within alternative pedagogical space. How negotiating encounters as an innovative project fosters deep learning will be discussed using the design of a digital self-management Professional Experience Project (PEP) Tool, to address a dilemma of practice: how best to develop connectedness capabilities.

A focus on 'ecologies of practice' (Snepvangers 2015; Rourke and Snepvangers 2016; Snepvangers and Bannon 2016) and 'practice encounters' (Snepvangers and Mathewson-Mitchell 2018a, b), as covert pedagogical devices also informs the emphasis on creative industry encounters within the PEP programme. Practice encounters:

explore non-linear, liminal and temporal engagement and ecologies of practice across relational and professional networks. What is crucial is that the visual artefact, research approach and materiality remains as a core focus uniting those working in the different areas of the cultural sphere. (Snepvangers and Mathewson-Mitchell 2018b, p. 4)

This focus is on how to actively plan 'practice' to address dilemmas of practice 'encounters' by providing embodied and artistic exemplars to countermand social progress and discovery narratives particularly in working with Indigenous Perspectives (Snepvangers and Ingrey-Ardell

2018; Snepvangers and Bulger 2016; Snepvangers 2016; Snepvangers and Allas 2015). In this co-authoring environment largely addressing marginalised groups the efficacy of participation (Bishop 2012; Literat 2012; Cornwall 2008; Doherty 2004) is an expanding field in relation to posthuman professional identity formation and creative industry partnerships.

The concept of an encounter is important in creative fields of practice, signalling multiple yet inconsistent coding, localised micro-contexts and the situatedness of case studies, exemplars and sites, whilst providing structure to investigate critical research frameworks. Simultaneously, encounter has a serendipitous quality that suits artistic and human-centred projects where creative innovation and sensitive outcomes are paramount. In the broader educational field, Connell (2013) defines history as “the creative development of social practice through time” (p. 104) whilst also pairing the concept of encounter as an alternative to neoliberal structures in educational fields. How alternative educational spaces provide a counterpoint, and insert possibilities and dimensions of intervention to challenge stable conceptions of social reproduction, is specifically of interest. The objective or purpose of encountering is therefore made manifest in how the ‘lived’ curriculum moves away from received content and stable, deductive assertions and existing records of subject and scope. Elements of stasis, dynamism and co-occurrence can therefore all be accommodated in creative encountering to actively encourage contingency and chance elements. Accepting the unforeseen and improbability of experience is a counterpoint to socially static ways of working with industries and the outcome driven domination of the educational world.

Following Connell (2013), conceiving of educational transformation as an encounter proceeds along a regenerative pathway, rather than simply confirming existing elites and privilege or alternatively re-confirming social groupings typically associated with poverty and/or deficit discourses. Significantly, Connell suggests that “encounter(s) between persons ... involves care” (p. 104). Connell is critical of technologies that reduce capacities for care, arguing that “Learning from a computer is not education; the machine does not care” and “Learning from a person behaving like a machine is not education” (p. 104). Highlighting the complexities of educators’ lives is also primary for Connell and manifest in the way encounters are conceived. For Connell, encounters have quali-

ties of individual autonomy, mutual respect, reciprocity, equality, inclusive realities and significantly for the arts, cognitive excitement and discovery as salient features (Connell 2013, pp. 104–105). This alternative mix of static and dynamic elements and qualities of care are engaged in the PEP space through stable digital elements in Moodle and a purpose built PEP Tool. Co-design and emergent negotiated project opportunities and diverse mentor relationships are all conceived as ‘practice encounters’ that occur dynamically in the PEP space.

The recent work conducted by the author in PEP has involved the negotiation of alternative curriculum spaces applying art and design pedagogies in seeking to move beyond historical notions embedded within existent syllabus and course outline documents. For example, in arts based syllabi in New South Wales (Australia), the concept of the ‘structured learning experiences’ (Creative Arts K-6 Draft Syllabus for Consultation, NESAs, 2018, p. 11), is a precursor to this work as an organisational curriculum device. Such concepts are acknowledged as necessary to meet the need for structure in formal educational sites, although in new engagements were seen as necessary by the author to understand curriculum interventions in tertiary art and design. “Practice encounters” (Snepvangers and Mathewson-Mitchell 2018a, b, p. 4) unsettles notions of teaching as being only about structure and ‘practice’ in arts based research. The need to combine an element of chance and disequilibrium using embodied learning devices such as ‘creative encounters’ has led to new envisioning of tertiary art and design curriculum. A key objective here is extending appreciation of artworks beyond simply content, recognising the importance of practice-based ecologies, relationships and ecosystems in complex understandings of embodiment in the arts.

In exploring the notion of ‘practice encounters’ to re-imagine pedagogical projects in the Australian context, exhibitions such as *Encounters* at the National Museum of Australia (2016) provide ways to help understand how engaging previously ignored communities has the potential to change social practices and curatorial work in the museum. This chapter addresses a methodological perspective for 21st century creativity education using an ecological framework, through concepts of self-organisation. The work of Getzin et al. (2016) on “Fairy Circles” will be introduced in

the second part of the chapter, as a way to advance in a more integrated, and less siloed, response to pedagogical innovation. In the design and implementation of PEP I argue that actively utilising diverse conceptions of mentoring at scale and negotiated project opportunities comprises a dynamic learning system with capacity for creative encountering. Relationships and interstices in that project/mentoring dynamic are therefore prioritised, contingent and co-occurring. When combined with adequate resourcing in an online PEP digital system at scale, creative and adaptive student behaviours that have the capacity to address changing external conditions are invigorated. Conceptual relationships between individual educational agency and creative industry engagement have been approached in an ecological manner to adequately prepare students for 21st century creative practice and workplaces. This work within a Professional Experience Project (PEP) core compulsory final year course in the Honours year. Honours is a one year, additional fourth year of higher level study added to a three-year degree programme typically including an exhibition and practice-led research studio projects and PEP, in a large tertiary Art and Design faculty in Sydney, Australia. These intertwined research led course and programme arrangements have salience with Harris's advancement of a creative ecologies approach.

What Is the Professional Experience Project (PEP)?

A creative ecological approach to learning and educational design alongside purpose built living digital tools is presented as a propositional initiative for a recently conceived compulsory Professional Experience Project (herein referred to as PEP). The concept of a professional experience in real world scenarios, for example in Art & Design Education is not new in the tertiary sphere. What is new is that PEP in Fine Arts and Media, typically thought of as “non-traditional pathways” for professional experience and industry engagement was introduced for the first time in 2016. PEP in the studio fine arts and media space is only possible in a few institutions worldwide and this chapter explores the conceptual appropriateness and outcomes of artisanal and experimental ecologies partnered with digital tools and assets.

PEP is a final year core compulsory course, with academic credit for all undergraduate degree programmes within a Faculty of Art, Design and Media in a large metropolitan research-intensive university in Sydney, Australia. In this context, course indicates a single unit of study and a programme indicates a degree as a whole course of study. As director of engagement projects, and convenor of PEP and Art/Design in this HE education context, PEP presents me with a double-coded creative design challenge: how does PEP, as a 'creative' partnership arrangement, nested within formal institutional strategic visions inclusive of technology and efficiency imperatives, focus on academic excellence, social engagement and global impact. PEP is required to do diverse and sometimes contradictory work: it must maintain innovation with/in and between fields of practice, retain its identity as creative, while including new media that moves beyond representational debates towards social media, augmented and virtual reality sites and situations. The layers of PEP include:

- University – The University of New South Wales (UNSW) Sydney – 50,000 + students; from over 128 countries – focus on professional disciplines;
- Faculty – Art & Design (A&D) – 2000 students; 1 of 10 faculties of UNSW 50 countries;
- Degree programmes – Fine Arts, Design & Media;
- Courses – ADAD4000 & ADAD4001 Professional Experience Project (PEP) – 400 students each year; core in fourth year Honours across all studio degrees & dual awards.

PEP uses academic and industry reciprocities by constantly re-negotiating placement arrangements using a purpose-built living digital platform, a digital ecology. Temporal asynchronous access is applied flexibly, unbound by semesterisation, through a university Learning Management System (Moodle) for resources and a purpose-built PEP Tool for Assessment. The problematic nature of conceiving of communities as fixed stable entities is discussed most clearly in the work of Hopwood (2016). The following summary highlights the value of understanding learning as a creative ecology. These useful ideas can be applied to community engagement projects such as PEP comprising:

- Stability and change are not exclusive opposites, rather they constantly co-occur;
- Practices unfold amid subtle and less subtle minor and less minor changes;
- Connectedness in action (textures) alters meaningfully altered interpretations (repair, restoration and modification) to produce new textures;
- Simultaneous instability and preservation of practices explore professional learning as people work together. (Hopwood 2016, p. 73).

These dynamic features of practice provide robust considerations for developing connectedness capabilities in PEP as a kind of textual unfolding, with capacities for re-imagining to create new textures in student, industry and academic relations. One local challenge in the development of the new version of PEP was the previous existence and working mechanics of a successful Design Professional Experience for the last 20 years in the studio tertiary context of the author. The shifts from the older 'Design Professional Experience' programme to the Professional Experience Project (PEP) are outlined in the following table (Table 7.1):

Although it is beyond the scope of this chapter to explore in greater detail, it is important to introduce here the range of related key challenges in reimagining PEP which include:

Mentors

- integration of previous hosts/business/mentors into a newly designed PEP space;
- devising new sustainable projects and spaces for Fine Arts & Media students;

Projects

- designing sustainable projects using research driven digital project development;
- moving from analogue to digital records of image portfolios, communication and assessment;

Table 7.1 Shift from existing design professional experience (>25 years) to Professional Experience Project (PEP) in 2016

Design Professional Experience (>25 years)	Professional Experience Project (PEP)-2016
One degree programme Bachelor of Design & Dual Awards in Design >900 students	Four x degree programmes Bachelor of Design & Dual Awards in Design; Bachelor of Media Arts & Dual Awards in Media Arts; Bachelor of Fine Arts; Bachelor of Art Theory; >2000 students
Timeframe 560 hours (3 days per week full time typically completed)	Shorter interventions 150 hours (2/3 days/could be done during semester of four weeks full time & can extend to 300 hours)
Content – internship Hard copy course outline – Student ftf Forum; <i>Submissions:</i> – hard copy Designer statement (300 words) comprising: Personal; Portfolio of images, emphasis on presentational mode and completed at the end of PEP	Negotiating a project or series of projects Moodle Learning Management System (LMS) and PEP TOOL – Student ftf Forums Assessment Task 2: LMS and PEP Tool Interface. Online professional profile comprising: Externally facing Portfolio of student images/artwork- Online CV; Artist/designer statement (300 words) Completed prior to PEP placement via PEP Tool & re-written using “shifts in practice” at the end of PEP
<i>Submissions:</i> – hard copy Student finds a placement –approval and confidentiality form completed by host and student	Assessment Task 2: Three ways to find a PEP placement: 1. Arrange your own- student finds a placement; 2. Project opportunities pre-negotiated between industry mentors and PEP convenor will be advertised on the Moodle site. 3. Arrange your own self-devised project, which meets the aims of PEP with approval by the coordinator. Approval and confidentiality form completed by host and student submitted to PEP Tool

(continued)

Table 7.1 (continued)

Design Professional Experience (>25 years)	Professional Experience Project (PEP)-2016
Submissions: – hard copy Timesheet Industry – mentor feedback form; Student – Design in Practice Profile Personal; Emphasis on presentational mode and completed at the end of PEP	Assessment Task 3: Submission via Moodle and PEP Tool; Timesheet signed by mentor with three forms of feedback – student, industry and university; Student – PEP critical reflection report: Project profile and a critical reflection on PEP experience, 300 words in response to 6 questions focused on challenges faced and how students will change their artist/designer statement; new version of artist/designer statement indicating shifts in practice. Industry – PEP mentor feedback form; University – Personalised PEP Convenor statement

Students

- increasing student flexibility across diachronic timeframes whilst maintaining structure and timing of assessment;
- embedding a self-reflective expectations framework to provide a tripartite feedback structure (self, mentor and university);

Industry and Academia

- modelling changes to temporal practice and expectations to shift student, mentor and industry understandings about the role of PEP as ‘project’ rather than internship;
- negotiating new diverse entrepreneurial scales and structures to shift creative practice in art, design and media into non-traditional, yet creative fields of practice.

Evolving Challenges with PEP

Evolving challenges in designing PEP in 2016 provide context to inform the reimaged design regarding how mentors and projects are valued

entities in a spatially aware self-organising system. PEP has evolved from a design focused analogue synchronous experience ($n = 200$ students) with a design mentor towards a larger art, design and media presence with a range of professional mentors ($n = 400$ students p.a.) in lived asynchronous digital space. In Australia's higher education context, recent scholarship in related PEP concepts such as Work-Integrated Learning (WIL) signal the importance of equipping students with flexible options and transitional real-world world experiences before graduation. Whilst PEP at UNSW Faculty of Art & Design maintains traditional understanding of 'internship' such as defined periods of time in real-world hosts/organisations and business, recent innovations have shifted PEP conversations towards less time and "projects" as a negotiated space of student self-management.

PEP exemplifies the significance of how high-level resourcing has been deployed in programming digital system-level tools and how the careful design of a suite of evolving mentoring relationships prioritises students' under-utilised creative networks and connectedness capabilities (Bridgstock 2016). The design emphasis is on increased layering of self-organisational ecological thinking that uses diverse mentors in art, design and media, underpinning a commitment to equality through creative adaptation. Like de Bruin and Harris (2017) the interest here is in the creative design of new ecological frameworks that link academic learning with industry encounters as sustainable holistic partnerships. The explanatory framework in the tertiary and digital context of PEP provides new organisational insights and flexible options with regard to career-oriented problem solving and developing creative capacities in diverse fields of practice. Self-managing creative partnerships have implications for organisational change beyond art, design and media by expanding the diversity, structure and scale of mentoring relationships, supported by shared digital assets. In creative arts, shifts from analogue to digital, with regard to higher educational ePortfolios in assessment, is not necessarily innovative as curriculum and assessment in studios typically involves progressive, authentic practice-led tasks. This case extends the temporal advancement of PEP from hard copy portfolios that document individual received experi-

ence towards creation of individual online public professional portfolios, negotiated projects and critical self-reflective feedback as assessable tasks.

Further Challenges in Creative Professional Experience

Alongside these HE priorities in the changing tertiary context, addressing students as individuals within increasingly larger cohorts and amplified use of technologies at scale, presents further challenges. Larger cohorts of diverse groups alongside reduced subject choice have driven the growth of self-management as a way of personalising individual projects and feedback in HE. Re-imagining PEP includes this broader agenda of reform, whilst also maintaining integrity and ingenuity in creative fields of practice. Anticipating the significance of the structural mechanics and design of PEP as a living system situates the concept of 'creative industry encounters' more broadly within the theoretical discussion of how things come to 'matter' in new materialist discourse. Stengers (2005) work titled: 'an ecology of practices' is helpful in thinking about ecologies as habitats that can be empowered through concepts of fostering and belonging. Barad (2003) also links human and non-human ecologies suggesting that:

We do not obtain knowledge by standing outside of the world; we know because 'we' are of the world... *Onto-epistem-ology* the study of practice of knowing in being – is probably a better way to think about the kind of understandings that are needed to come to terms with how specific intra-actions matter. (Barad 2003, p. 829)

Continuing intra-actional debates into a lack of teleology's, Coole and Frost (2010) argue:

Conceiving matter as possessing its own modes of self-transformation, self-organization, and directedness, and thus no longer as simply passive or inert, disturbs the conventional sense that agents are exclusively humans

who possess the cognitive abilities, intentionality, and freedom to make autonomous decisions and the corollary presumption that humans have the right or ability to master nature. (Coole and Frost 2010, p. 10)

Siting entrepreneurship, innovation and creativity within the discourse of matter, inclusive of environmental sensibilities, self-organisational freedoms and “agentic capacities” (Coole and Frost 2010, p. 10), substantially broadens how materiality has its own nonteleological forces with capacity for relocation. The way industry focused terms such as entrepreneurship are deployed therefore becomes significant in foregrounding how new ecosystems emerge within the loci of control exhibited in institutional narratives of aspiration. For Coole and Frost, matter is “indeterminate, constantly forming and reforming in unexpected ways ... ‘matter becomes’ rather than that ‘matter is’” (p. 10).

The corollary for the creative space of PEP as ‘internship’ existing in a massive, stable, passive abundance organised by a human organisational sentience is therefore a rather erroneous assumption. The significance of industry partnerships as spaces of becoming is that creative ecologies form meaningful patterns that paradoxically typically emerge in ambiguous ways within ecologies of practice. In this way, voids and encounters have coherence and appropriateness within corporeally-constituted relational fields of practice. The capacity to assemble, disintegrate and re-assemble across sentient and non-sentient ontologies signals the significance of negotiating projects across dissimilar structures and scales alongside diverse mentoring as key self-organisational tools. The focus in the next section is on showing how a carefully articulated industry mentor engagement strategy has been reimagined using non-teleological principles. Multiple tiers of diverse mentors use a living digital platform introducing flow, mutuality and creative adaptation into PEP as a transitional academic/industry space.

The Significance of Creative Practice

In contemporary art, the linguistic terminology of ‘creative practice’ is an additional challenging element in understanding the value and significance of PEP. Craft and artistic making is variously enculturated through

experiences of schooling, tertiary study alongside alternative spaces and trajectories into artworld participation. Adding the concept of 'professional practice' therefore conjures up a range of bleak alternatives in many A&D students' minds. The perceived shift from personalised making practice with a strong focus on skill development (particularly in Media Arts) towards the language of careers, jobs, markets and the social entrepreneur requires a shift in world view. Contemporary digital design integrated within the university website, research-led projects and nuanced language acquisition in PEP seek to countermand such perceptions. Diverse mentors, co-negotiation of project opportunities (student, industry, university) build ecological concepts of reciprocity alongside self-organisational flexible digital tools.

In the current socio-economic and political climate, arts are primarily discussed in terms of financial capital and funding, yet PEP values the social and public utility of professional experience as an artistic research-driven partnership. Daniel and Daniel (2014) highlight this dilemma, suggesting that creative and performing arts graduates enter into highly competitive part time, often isolated and marginalised career pathways. The requirement to be individually and collectively entrepreneurial in the creative industries marks out professional practice experiences such as PEP as an under-researched area for future preparation (p. 1). How representations of mentors (hosts/collectives/business), projects (negotiated opportunities rather than internships), and students (diverse profiles/studios) come to matter, engages creative practice with career pathways in a digital ecology. What constitutes a creative partnership in PEP and how student projects and activities are designed to directly foster adaptation in non-traditional art and media placements, is one key focus. Creative industry is showing signs of fragility, including declining support for the arts. Salient dilemmas for those identifying as artists were highlighted in the report 'Making Art Work: A summary and response by the Australia Council for the Arts' (2017), using photographic/textual vignettes. The artist, Abdul-Rahman Abdullah comments:

One of the most challenging aspects of pursuing a full-time career in contemporary art is the continuous pursuit of different income streams necessary to sustain a visual art practice. Everyone's needs and capacities are so

different and it's a constantly shifting landscape that we're working within. For me, it's important to recognise the different areas within the cultural industries where my specific skills and experiences can be applied outside of the studio and gallery environment. (Abdul-Rahman Abdullah 2017, p. 6)

Although remaining within an individual diversity and creative industry discourse, the shifting terrain is clearly implied through the expressed need to apply specific artistic skills and experiences to different areas within cultural industries. There is a need to recognise how artistic practice beyond traditional 'studio and gallery environments' can be enhanced when seeking a career in contemporary art. By enhancing creative opportunities beyond traditional applications of art/design/media skills, PEP posits a range of projects and mentors across diverse structures and scales, within and beyond creative industries.

Like traditional remits of professional degree programmes in teacher education, PEP placements are increasingly being sourced by the institution, including professional development of mentors, providing quality career enhancement. PEP is different in that the mentors are not formally accredited. Adding to complexity in many HE contexts, there are centralised units, such as career/job departments all managing aspects of Work Integrated Learning (WIL). Governments and universities alike are struggling to articulate the role of employability in non-specialist degree programmes at scale, with diverse student cohorts. As Marttila (2015) cautions, in entrepreneurial debates, generalised notions of a 'universal' student and jobs, using predetermined career pathways introduces a precarious instrumentality, foreign to the concept of adaptive and agile creative ecologies.

Academic coursework is a rich terrain in which to negotiate research driven creative projects with a range of professional hosts, businesses and agencies. However, part of the locutionary response to curriculum design challenges resides in careful articulation of a shift in understanding from prioritising individualised human creativities as talent and giftedness towards the primacy of social and ecological dimensions of research, teaching and service. Localised initiatives at The University of New South Wales include social engagement and creative ecology as key strategic

priorities, linking knowledge exchange and social progress with economic prosperity. For example, one key aim is:

To have an effective industry–staff–student ecosystem for innovation and entrepreneurship and to be known as a place where entrepreneurship is nurtured, so that our best innovative minds can flourish and take new ideas to market or transform the way we look at the world through social entrepreneurship. (UNSW, 2025 Strategy 2015, p. 21)

Social entrepreneurship-as-partnership, systemic thinking and industry networks appear front and centre, alongside research and teaching excellence. This shift is emergent as staff and student grapple with new structures and initiatives to address what are described as global resourcefulness, social entrepreneurship and sustainability imperatives. Social engagement and global impact initiatives are on the one hand extremely useful in enhancing the traditional tripartite (research, teaching and service) notions of an academic role in Australian HE. As an always third structural imperative ‘Service’ rhetoric is gradually being shifted towards contemporary concepts such as ‘knowledge exchange’, ‘social entrepreneurship’; and ‘enterprise systems’. On a grander scale these ideas are reminiscent of the challenges invoked earlier, regarding the way technologies and efficiencies can be difficult to balance alongside creative industry agendas of agility and adaptivity. The economic sociological perspective of Marttila (2018, 2015, 2013) anticipates social entrepreneurial space for creative partnerships in PEP. Marttila posits the “metaphorization” (Marttila 2015, p. 188) of the entrepreneur within creativity discourse, as a key challenge in the creative industry arena beyond contemporary individual needs for creative adaptation, collaborative activity and workplace flexibility.

In problematising how the “general ‘spirit of entrepreneurship’ represented the cultural ethos required for capitalism which motivates actors to participate in economic interactions” (p. 187), Marttila argues that entrepreneurship is not necessarily a natural interaction in society. Rather he points out that “neither the entrepreneur nor entrepreneurial action are objective and constitutive facts” (p. 187). Like many projects that engage scalability, Marttila’s concern is for the individual within the sys-

temic relations imposed by universalising discourses specifically, how “the entrepreneur may serve as a subject ideal to be used as an example of the creative subject” (p. 188). According to Marttila, caution needs to be taken when subject ideals such as the entrepreneur are perceived as being applied to all possible subjects. Regarding a closer analysis of ‘diachronic processes’ of cultural change within neoliberalism and moving the entrepreneur from “an economic actor into a society-wide role model of creative ite subjectivity’ (2018, p. 575), Marttila suggests alternatives. Earlier critics of entrepreneurship as ‘regimes of domination’ (p. 575–577), are challenged here through an unmasking process of entrepreneurial activities. Marttila provides a contrasting view, which does not view entrepreneurship as an empty concept, devoid of meaning (p. 577).

Using the meta narrative of the Knowledge Based Economic (KBE), knowledge society and the welfare society, Marttila’s (2018) interest is in the interstices of the discourse on entrepreneur as creative subject, by using the term “interdiscursive” to situate the entrepreneur. The useful conclusion is that the “de-differentiation and universalization of the entrepreneur as the metaphor of creativity took place in the ‘interdiscursive’ interface between three discourses in the KBE, ‘knowledge society’ and ‘welfare society’” (pp. 575–576). The lack of singular discourse in the KBE, albeit with unequal power relations, means that entrepreneurial roles and niftiness sit within cultural hegemony as “interdiscursive overlapping” with a new range of strategies for “conceptual openness” (p. 576–577) with capacity for actors and systems to operate like a synecdoche metaphor. Marttila’s use of synecdoche, moves the role of the entrepreneur beyond a figure of speech to act as possible way to provide conceptual mechanics. Words or phrases can refer to a part of something as a substitute to stand in for the whole, or vice versa. Such slippages provide opportunities for co-joined and previously unrelated phenomena (p. 577) to bring economic innovation into being. Spatial relations across artistic and scientific domains become significant for the purpose of creating a digital living design habitat with PEP partnerships together with nuanced ways of understanding diverse economic dimensions of entrepreneurship.

Stable, dynamic and inter-static terminology provides a way of thinking about intervening in social progress narratives. For example, Marttila's interest in interdiscursive overlapping has resonance with how Khan et al.'s (2012) inter-static observations are described as component parts of holistic systems comprising static, dynamic and inter-static spatial articulations. The visual/linguistic analysis by Khan explains meanings as follows:

- static: relations between stationary objects – Static relations can establish the scene settings;
- dynamic: direction and path of moving objects – Dynamic relations are used for finding activities present;
- inter-static and dynamic: relations between moving and not moving objects – Inter-static and dynamic relations are a mixture of stationary and non-stationary objects and they explain semantics of the complete scene.
- (Khan et al. 2012, p. 43).

Spatial relationships between entities can be a proposition for thinking about 'interdiscursive overlapping' and co-joined activities leading to new creative approaches to 'conceptual openness' in the entrepreneurial landscape of a KBE. The next section posits a way to think about creative ecologies in PEP using a scientific-artistic worlding approach. The aim is to provide a nuanced understanding of the significance of alternative spatial understandings of static, dynamic and inter-static matter in PEP as an educational site.

Desert Circles

Using the phenomenon uncovered in a recently published PNAS article on "Desert Circles" (Getzin et al. 2016) I propose a literal, grassroots ecological approach to designing and building digital tools and dynamic professional experiences within PEP. The networks of possibility in PEP

include mentors' relationships, research-led project negotiation and equipping students with entrepreneurial ways of working. These acknowledge the interstices of PEP, beyond the stable and dynamic structures of management in the university. Such interstices in academic coursework are often intangible as they invisibly portray the primacy of relationships in a network, with the added temporal dimension of change. As the concept of full time work evaporates in many industries, a new materialist approach might inform the design of re-imagined creative industry encounters in PEP. The nexus of art/science relations and transdisciplinary possibilities of extreme ecological environments in contemporary art practice informs how self-organisational systems become significant when resources are limited. Limited resources in the PEP space include, time, diverse worlding of making/professional practice, fickle income streams, institutional support and fast-paced agile work environments. Within PEP as an artistic and a professional context, self-organisational phenomena observed in the desert of Western Australia has the potential to inform creative industry encounters in the fragile world of professional engagement and career pathways.

Desert circle patternmaking and gap phenomenon is only observable from an aerial viewpoint. Australian images by Getzin and his team were reported in media articles worldwide, showing close-up and aerial drone photographs (Getzin in Crofts 2016; Ryall 2016; Sullivan 2016). The patternmaking, whilst seemingly regular, is disrupted through various vegetation, insect activity, human roadworks and other phenomena and importantly it is resource dependent, only occurring under certain extreme weather conditions. It is not until this networked, yet temporal phenomenon is made explicit through an alternative perspective, such as aerial viewpoints through visualisation that the multi-dimensionality of this rare ecological relationship is revealed. Getzin et al. (2016) used fieldwork, remote sensing, spatial pattern analysis, mathematical modelling and pattern formation theory. They were seeking to understand diverse "pattern-forming biomass –water feedbacks" (p. 3551) to investigate that even though the Australian Fairy Circles have similar patterning characteristics to their Namibian counterparts, the feedback mechanisms and qualities of water flow were quite different. The scarce water resource in extreme desert environments was either uptake through soil-water dif-

fusion feedback in Namibia or infiltration feedback via water over land flows in Australia. Without diverting to in-depth scientific explanations, what is significant for thinking about scarce resources and self-organisation are the qualities of the feedback flows, mechanics of water transport, soil-water diffusion combined with diverse soil types: sand in Namibia and hard soil in Australia (p. 3555). Getzin et al. conclude: “these observations are in line with a central universality principle of pattern-formation theory and support the applicability of this theory to wider contexts of spatial self-organization in ecology” (p. 3551).

If we consider PEP as a human-devised digital system, literally a world away from remote Western Australian ecosystems, it still addresses common HE institutional barriers such as poor integration of networks and connectedness capabilities. Herein lies potentiality for these issues to be addressed through spatial ecologies. Making the mechanics visible in the creative ecology of PEP as a pattern-making system with diverse formational dynamics leads to further creative value creation as patterns of sustainable activity. The next section will discuss how diverse layered mentoring relationships inform the structural dimensions of PEP as a self-organisational system to increase connective bonds by changing flows of human investment.

Desert Ecology as a Self-Organising System

Self-organisation has been observed in ecological desert circle formation as described by Getzin et al. (2016). The way the desert circles form will be used as a point of comparison for how network connectivity can be developed in the context of the PEP as a tertiary professional experience programme. A quick Google image search of the term ‘networks’ (<http://bit.ly/2Fy8MmE>) yields a variety of mostly two-dimensional representational relationships often using circular diagrams and arrows to capture complex relationships. Networks are often difficult to represent, appear in limited dimensionality and often struggle for coherence in educational design for creativity. In contrast to such stable representational diagrams, showing some aspects of interaction, circular desert circles offer real world biodiversity on a multidimensional level with their own nonteleological

forces for relocation. Simultaneously, the appearance of desert circles question how structures are not necessarily stable or exactly the same in size, shape or vegetal variability. Each circle relies on a discrete set of ecological circumstances for sustenance and reproducibility. The aim is to propose that creative professional practice can utilise ecological principles with regard to developing adaptable partnerships for enhancing creative industry encounters through self-organisation of knowledge networks.

Gaps, labyrinths, spots and rings are visible in Getzin's drone photographs (Getzin in Crofts 2016; Ryall 2016; Sullivan 2016). Presenting as different pattern morphologies in the spinifex grassland in Western Australia they can reach beyond two metres and up to seven metres. On ground images of a singular "Fairy Circle" in the media articles indicated above, show substantial dimensionality, specifically how you could be walking through spinifex grass yet, remain unaware of the regularity of the patterning and spatiality of gaps as well as diversity of shape, size and connectivity. As a self-organising system both patterns and gaps are observed simultaneously as a linked ecological system.

Applying these ecological phenomena to rapidly changing, resource-poor human ecologies, the patterns "are determined by the nature of the instabilities that induce the patterns and predicts that different systems that go through the same instability type will show similar patterns" (Getzin et al. 2016, p. 3554). In this ecological system, what drives the formation of new circles and structurally sound ecological patterns is the nature of instabilities in resource poor environments. The images of desert ecologies in Western Australia also reflect contemporary contextual concerns in artistic practice. For example, looking at how unexplored places/ecologies can inspire new technologies and creative architectures is the focus of much transdisciplinary contemporary artistic practice. As we grapple with more extreme and precarious environmental conditions, the proposition becomes: how could the constraints of extreme environments lead to new creative tools, methods and technologies in adaptive and responsive career focused pathways. In contemporary art and design practice there is great interest in art/science collaborations. Especially exploring how living on edges, boundaries and in transitory/extreme environments expands understanding of living systems and the role of constraints and resources in such spaces.

How might ecological structures and certain types of environmental habitats and networks support the development of self-organised fairy/desert circles? This changing environment anticipates a visual PEP ecosystem that describes a possible human/network interface with self-organisational qualities. Concepts regarding the inability to see the pattern on the ground (only from the air) relate to the 1000 hosts and businesses in PEP and how they are all operating with discrete resources, affordances and constraints. Yet if we take an aerial view of the ecosystem self-organisational principles of mutuality, specific localities and community ecology start to manifest. A comparison with Namibia is also useful as the final effect of the fairy circle appears to be similar, yet, the circumstances of each creation show quite different mechanisms. The role of diverse conceptions of mentors in PEP across a range of hosts/business/organisational scales and structures allows me to think about how resources (water flow across ground – Australian Fairy Circles) and mentors as a resource can be compared regarding the potentiality for unstructured groups to transform into self-organised systems.

Negotiated Projects and Diverse Mentors as Dynamic and Inter-Static Creative Ecologies

When academic programmes are appropriately resourced creative professional experience networks have implications for developing connectedness capabilities (Bridgstock 2016). To achieve a focus on equity in developing graduate networked capabilities, I have developed the concept of creative industry encounters by proposing negotiation of ‘projects’ or a series of projects rather than traditional notions of ‘internship’ or WIL as time spent ‘on the job’. This approach aims to empower students through shifting entrenched beliefs in two ways: firstly, through the articulation of a range of diverse mentors and mentoring relationships across structure and scale in real world creative fields of practice in art, design and media. Secondly, signalling the significance of resourcing self-managing digital tools/tasks alongside creative project scenario development in partnership with students, hosts and business. A broader

description of how projects are negotiated is beyond the scope of the chapter, other than to say that focus is on depth and quality of experience as a dynamic predictor of biodiversity rather than time spent in situ. Mechanics of how diverse quality experience generates new quality experiences leading to relationship reciprocity and newly formed patterns of sustainability moves this work from a simple description of increasing student voice in a career pathway discussion of individual prowess.

Shifts in practice identified through skills, new knowledge, re-articulated artist/designer statements allow students to develop capability descriptors beyond listing PEP as a bullet point on their CV. Reflective practice is purposively inserted to enhance the range and type of quality feedback loops staged across the final year of the degree programmes and consistent with the significance of feedback conceived as an ecological flow. Negotiation of 'project' by/with students and industry led by the university convenor of PEP are lodged behind a university management system (LMS) to foster a nurturing, caring and belonging ecology rather than simply advertising already created industry internships. This design feature encourages students to have a seat at the table in project development, to intervene in line management type 'jobs' that are delegated, and to begin a process of self-management through nurturing & flow. Working with industry leaders, artists, designers and well-resourced digital tools structure means that creative industry encounters are not a 'cold-call'. The next stage of this research is to evaluate the number, range and quality of projects, creating tabs and developing research-led creative projects as a priority in the Honours year. Qualitatively coding the value of unpredictable meetings, matchmaking encounters & creative-led project initiatives in the creation of sustainable creative ecologies is the next phase of the research.

Mentoring is also conceived of as a dynamic and inter-static phenomenon that reveals how the expansion of the stable digital platforms in PEP, as an appropriately resourced ecosystem (like having adequate water flow) can equip students' with self-sustaining capabilities. Actively planning for transfer of creative skills sets across diverse structures and scales extends the concept of creative ecologies towards the creation of diverse mentor ecologies, each with potentiality for previously unstructured groups to transform into a sustainable self-organisational system. The

potentialities for grassroots connectedness to expand are greatly enhanced through the nature of the instabilities introduced, in this case through biodiversity of mentors. The iterative propositions for how digital artisanal ecologies for mentor and project development over the past two years have been developed include:

- Mentor is a practitioner, artisan, sole trader – one on one bespoke PEP with artisan;
- Mentor is creative producer, studio manager- small to medium scale start-ups, collectives, hubs, MakerSpaces;
- Mentor may not have specific art/media practitioner skill set – small galleries, pop-ups, non-traditional spaces, festivals, projects, exhibitions;
- Mentor is a practitioner, project manager, larger team focus – larger galleries, museums, GLAM sector, biennales, public art projects;
- Mentor is digital producer, manager of design thinking – large companies, business profiles in Media as well as non-traditional sectors: banking, property development, university;
- Mentor may not have specific art/media practitioner skill set – yet requires digital input – Precincts – localised business/host/mentor in locational relationships.

Within this evolving environmental terrain, the popularity of PEP and high number of mentors who want to ‘give back’ and provide nurturing environments bodes well for building the next generation through an ethics of care amongst cultivation of relationships. Ecologies of practice relating to the ebb and flow of language and space of connectedness, drives these diverse mentor relationships. Simultaneously, diverse student and academic ecologies are developed through adaptivity & matchmaking. Diverse mentoring ecologies form a key part of the synecdoche metaphor for the organisational systems in PEP. Previously unrelated phenomena are being assisted to dynamically connect in subtle ways, to bring economic innovation into being.

In creating a digital living design habitat for PEP the inability to see the pattern on the ground (desert circle phenomena is only from the air), relates well to the 1000 hosts and businesses in PEP, specifically how they

operate with discrete resources, affordances and constraints. Yet, if we take an aerial view of the ecosystem self-organisational principles of mutuality, specific localities and community ecology start to manifest. Many networks and relationships are represented using limited dimensionality such as circular diagrams in educational design, yet the desert circles allow visibility regarding how structures are not necessarily stable and rely on a discrete set of resources and circumstances. The circumstances of each creative partnership (mentors and projects) show quite a different mechanism. The role of diverse conceptions of mentors in PEP across a range of hosts/business/organisational scales and structures invites a discussion about how resources (water action across ground – Australian Fairy Circles) and mentors as a resource can be compared regarding how unstructured groups transform into self-organised systems.

Concluding with Inter-Static and Dynamic Creative Ecologies

Creative ecologies have been discussed in metaphoric ways within the HE context using the rare delivery of PEP across art, design and media. Spatially significant components in PEP such as diverse mentoring, negotiated project development and student self-management provide a propositional account of a creative ecological system. This contribution extends beyond the concept of voice to reveal the mechanics of production and consumption ensuring development of case based knowledge, care and advanced knowledge in creative professional contexts. Knowledge based economies such as PEP value the entrepreneurial figure as a socially engaged student who actively conducts themselves in a resilient way. Slippages in how entrepreneurial dispositions are currently understood provide opportunities for previously unrelated phenomena to bring co-joined innovation into being.

Sustainable relationships between creativity and science are seen as a necessary tool for change, in the development and management of new concepts of creative economies. The natural occurrence of “Fairy Circles” offers a metaphorical view of matter as having stable, dynamic and inter-

stitial properties dependent on resource availability and the physical action of water flow. Resource poor desert ecology shows how stable systems and procedures (academic requirements and digital assets in PEP) can be partnered with dynamic mechanisms (diverse mentoring and negotiated project development in PEP) to produce a self-organisational system.

Aerial viewpoints of in-between connectivity established during PEP, often invisible to students, industry and the academy are acknowledged as interstitial spaces of possibility. Voids and creative encounters become the new currency of curricula coherence and appropriateness with agentic capacity to assemble, disintegrate and re-assemble across diverse ontologies of practice. Making pattern-making systems with diverse dynamics visible leads to value creation as sustainable activity. Although the mechanics of PEP may look the same, just like the quasi similarities of “Fairy Circles” in Namibia and Australia, pedagogically negotiating projects across dissimilar structures and scales alongside diverse mentoring are key self-organising curriculum tools. Acknowledging diverse flows of information and qualities of resourcing across temporal interdiscursive space, has the capacity to move beyond stable, linear management and social progress narratives in HE. Through active use of agentic capacities in curriculum design, new tangible ecosystems of mentoring relations have emerged. The inter-static location of ‘creative industry encounters’ as negotiated projects and diverse mentors partnered with stable digital assets, is poised to continue grassroots proliferation. Understanding matter and patterns in biodiverse ecologies shows how high-level connectedness in the human sphere can be developed by the instability of projects and mentors in PEP. Dynamic curriculum design advances creative ecologies as a quality system in HE. Future research is planned to review the lifecycle of PEP as a self-organisational system, given durational aspects of becoming, living and mortality inherent in an existent system.

References

- Abdullah, A. R. (2017). *Making Art Work: A Summary and Response by the Australia Council for the Arts*. Sydney: Australia Council for the Arts ISBN: 978-0-6482152-1-9.

- Barad, K. (2003). Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs: Journal of Women in Culture and Society*, 28(3), 801–831.
- Bishop, C. (2012). *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London: Verso.
- Bridgstock, R. (2016). *Graduate Employability 2.0: Social Networks for Learning, Career Development and Innovation in the Digital Age*. Paper for Discussion, Graduate Employability 2.0 Forum, QUT. Retrieved from http://www.graduateemployability2-0.com/wpcontent/uploads/dlm_uploads/2016/09/Graduate-employability-2-0-discussion-paper.pdf. Accessed 4 Apr 2018.
- Connell, R. (2013). The Neoliberal Cascade and Education: An Essay on the Market Agenda and Its Consequences. *Critical Studies in Education*, 54(2), 99–112.
- Coole, D., & Frost, S. (2010). *New Materialisms: Ontology, Agency and Politics*. Durham: Duke University Press.
- Cornwall, A. (2008). Unpacking ‘Participation’: Models, Meanings and Practices. *Community Development Journal*, 43(3), 269–283.
- Creative Arts K-6 Draft Syllabus for Consultation. (2018, 12 March–13 May). NSW Education Standards Authority (NESA). Retrieved from <http://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/creative-arts/syllabus-development>. Accessed 4 Apr 2018.
- Crofts, C. (2016). Australia’s Mysterious “Fairy Circles”. Retrieved from www.national-geographic.com.au/nature/australias-mysterious-fairy-circles.aspx. Accessed 4 Apr 2018.
- Daniel, R., & Daniel, L. (2014). Breaking Down Barriers: The Implementation of Work Integrated Learning Strategies to Transition Creative and Performing Artists to Industry. In *Proceedings of the Australian Collaborative Education Network (ACEN) National Conference*. Gold Coast, Australia. Retrieved from: <http://acen.edu.au/2014Conference/2014-ACEN-Conference-Full-Proceedings.pdf?x99824>. Accessed 4 Apr.
- de Bruin, L. R., & Harris, A. (2017). Fostering Creative Ecologies in Australasian Secondary Schools. *Australian Journal of Teacher Education*, 42(9), 23–43. <https://doi.org/10.14221/ajte.2017v42n9.2>.
- Deleuze, G. (1994). *Difference & Repetition* (P. Patton, Trans.). New York: Columbia University Press.
- Doherty, C. (Ed.). (2004). *Contemporary Art from Studio to Situation*. London: Black Dog Publishing ISBN: 978-1904772064.

- Getzin, S., Yizhaq, H., Bell, B., Erickson, T., Postleg, A., Katrah, I., Tzuki, O., Zelnikb, Y., Wiegandj, K., Wieganda, T., & Meron, E. (2016). Discovery of Fairy Circles in Australia Supports Self-Organization Theory. *Proceedings of the National Academy of Science (PNAS)*, 13(13), 3551–2556. Retrieved from <http://www.pnas.org/content/113/13/3551>. Accessed 4 Apr.
- Harris, A. (2014). *The Creative Turn: Toward a New Aesthetic Imaginary*. Rotterdam: Sense Publishers.
- Harris, A. (2016). *Creativity and Education*. London: Palgrave Macmillan.
- Harris, A. (2017). Creative Ecologies: Fostering Creativity in Secondary Schools Final Report. Retrieved from: <https://www.creativeresearchhub.com>, <https://www.creativeresearchhub.com/creative-education>. Accessed 4 Apr 2018.
- Hopwood, N. (2016). *Professional Practice and Learning: Times, Spaces, Bodies, Things*. Heidelberg: Springer.
- Howkins, J. (2009). *//creative ecologies//where_thinking_is_ a_proper_job*. St Lucia: The University of Queensland Press, Brisbane.
- Kemmis, S., Edwards-Groves, C., Wilkinson, J., & Hardy, I. (2012). Ecologies of Practice. In A. Lee, P. Hager, & A. Reich (Eds.), *Practice, Learning and Change: Practice Theory Perspectives on Professional Learning* (pp. 33–49). Dordrecht: Springer.
- Khan, M., Nawab, R., & Gotoh, Y. (2012). Natural Language Descriptions of Visual Scenes: Corpus Generation and Analysis. In *Proceedings of the Joint Workshop on Exploiting Synergies Between Information Retrieval and Machine Translation (ESIRMT) and Hybrid Approaches to Machine Translation (HyTra) at EACL-2012*, Association for Computational Linguistics (ACL), USA, pp. 38–47.
- Literat, I. (2012). The Work of Art in the Age of Mediated Participation: Crowdsourced Art and Collective Creativity. *International Journal of Communication*, 6, 2962–2984.
- Marttila, T. (2013). Governmentality Research?: A Case Study of the Governmentality of the Entrepreneur in the French Epistemological Tradition. *Historical Social Research/Historische Sozialforschung*, 38(4), 293–331.
- Marttila, T. (2015). *Post-Foundational Discourse Analysis: From Political Difference to Empirical Research*. Basingstoke: Palgrave Macmillan.
- Marttila, T. (2018). Neoliberalism, the Knowledge-Based Economy and the Entrepreneur as Metaphor. In D. Cahil, M. Cooper, M. Konings & D. Primrose (Eds.), *The SAGE Handbook of Neoliberalism* (Chapter 42, pp. 565–579). Thousand Oaks: Sage Publications.

- National Museum of Australia. (2016). *Encounters: Revealing stories of Aboriginal and Torres Strait Islander objects from the British Museum Catalogue* (pp. 40–43). Canberra: National Museum of Australia (NMA).
- Networks. (2018). Google Image Search – <https://bit.ly/2Fy8MmE> Google Image Search for the Term “Networks”. Retrieved from: <https://www.google.com.au>. Accessed 4 Apr.
- O’Sullivan, S. (2006). *Art Encounter. Deleuze and Guattari, Thought Beyond Representation*. New York: Palgrave Macmillan.
- Pantazis, V. E. (2012). The “Encounter” as an “Event of Truth” in Education: An Anthropological-Pedagogical Approach. *Educational Theory*, 62(6), 641–657.
- Rourke, A., & Snepvangers, K. (2016). Ecologies of Practice in Tertiary Art & Design: A Review of Two Cases. *Higher Education, Skills and Work-Based Learning, Emerald Insight*. 6(1), 69–85. ISSN: 2042-3896 <https://doi.org/10.1108/HESWBL-04-2015-0014>.
- Ryall, J. (2016). Mysterious Fairy Circles Discovered in Australian Outback. Retrieved from: <http://mashable.com/2016/03/15/fairy-circles-australia/#SoApL8OaBOq2Mashable.com>. Accessed 4 Apr 2018.
- Snepvangers, K. (2015). The Ecology of the Art Class: Art Teacher Values, Beliefs and Practices. In Gregory, P. (Ed.), *Tales of Art and Curiosity from Canterbury*. Canterbury Christ Church University/NSEAD. Conference Proceedings: *InSea European Regional Congress*, Canterbury. pp. 524–535. Retrieved from: <http://insea.org/docs/inseapublications/proceedings/InSEACongress2013PROCEEDINGS.pdf>. Accessed 4 Apr 2018.
- Snepvangers, K. (2016). Bending the Twig: Indigenous Perspectives in Tertiary Art and Design. *Art Education Australia*. Special Issue, WAAE: Transform: From Inception to Innovation in Arts Education. 37(2), 165–183. ISSN 1032-1942.
- Snepvangers, K., & Allas, T. (2015). Developing Expertise and Engagement with Indigenous Perspectives in Tertiary Art and Design. In A. Rourke & V. Rees (Eds.), *Moving from Novice to Expert: Developing Expertise in the Visual Domain* (pp. 255–286). Champaign: Common Ground Publishing/University of Illinois.
- Snepvangers, K., & Bannon, R. (2016). Transformative Learning: Ecologies of Practice in Art and Design Education. *Art Education Australia*, 37(1), 38–56. ISSN 1032-1942.
- Snepvangers, K., & Bulger, J. (2016). Learning in Liminal Spaces: Encountering Indigenous Knowledge and Artworks in Professional Education. *Fusion. Special Issue – Professional Education in the E-learning World: Scholarship*,

Practice and Digital Technologies. Issue 8. Published by Charles Sturt University. ISSN 2201-7208.

- Snepvangers, K., & Ingrey-Arndell, J. (2018). Spaces of Speaking: Liminality and Case-Based Knowledge in Arts Research and Practice. In L. Knight & L. Cutcher (Eds.), *Arts, Research, Education: Connections and Directions* (pp. 61–87). Cham: Springer/Arts Based Education Research.
- Snepvangers, K., & Mathewson-Mitchell, D. (2018a). Transforming Dialogues Through Ecologies of Practice in Art, Education and the Cultural Sphere. In K. Snepvangers & D. Mathewson-Mitchell (Eds.), *Beyond Community Engagement: Transforming Dialogues in Art, Education and the Cultural Sphere*. Champaign: Common Ground Publishing/University of Illinois.
- Snepvangers, K., & Mathewson-Mitchell, D. (2018b). Reflections on Transformative Pedagogies and Practice Encounters in the Cultural Sphere. In K. Snepvangers & D. Mathewson-Mitchell (Eds.), *Beyond Community Engagement: Transforming Dialogues in Art, Education and the Cultural Sphere*. Champaign: Common Ground Publishing: University of Illinois.
- Stengers, I. (2005). Introductory Notes On: An Ecology of Practices. *Cultural Studies Review*, 11(1), 183–196.
- UNSW 2025 Strategy: *Our Strategic Priorities and Themes*. (2015). UNSW Marketing Services. Retrieved from https://www.2025.unsw.edu.au/sites/default/files/uploads/unsw_2025strategy_201015.pdf. Accessed 20 Feb 2018.



8

Organisational Change for Creativity in Education

Leon de Bruin

Introduction

Educational institutions today are under unprecedented pressures to change, develop and create both new modes of instruction for students, and innovation in the ways they organise, collaborate, and function. But the means by which they do this also affect the final ends. The ways that educational organisations employ knowledge and principles, and relate them to everyday school leadership and practice, significantly impact on student learning outcomes (Robinson et al. 2007). Organisational processes also exert social influences across individuals and groups operating within the structured relationships and activities of an organisation (Bush 2008).

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Leadership and Organisational Change

School administrations apply leadership that develops and reinforces organisational principles and knowledge production. They negotiate what knowledge is taught, the methods and pedagogies that are employed, and the code or charter through which learning environments and relationships are developed and promoted (Day et al. 2001). Principals lead their own learning, and that of their staff within a complex stratum of needs and wants. They come to terms and guide their workforces through new technologies, educational concepts and governmental initiatives. In addition, they best meet the needs of learners by organisationally adjusting to new social movements and the politics of difference, distinguishing what Taylor et al. (1997) argue as the difference between instrumental outcomes and the potential for staff and student emancipation. A working definition suggests that:

Leadership is a process of influence leading to the achievement of desired purposes. Successful leaders develop a vision for their schools based on their personal and professional values. They articulate this vision at every opportunity and influence their staff and other stakeholders to share the vision. The philosophy, structures and activities of the school are geared towards the achievement of this shared vision. (Bush and Glover 2003, p. 5)

Most definitions of leadership reflect the same assumption – leadership requires a social influence process whereby intentional influence is exerted by one person (or group) over other people (or groups) to structure relationships and activities within a group or organisation (Bush 2008). Embedded within most understandings are that the central concept of leadership is influence and not authority, that leadership is an intentional process, and that this influence is a fluid and dynamic process that may be exercised by groups as well as individuals.

How schools ensure workforces adopt a confluence of practice with organisational direction, in what is appropriated and embedded in practice, and that makes a distinct and palpable difference to the actions and working beliefs of school staff in 21st century schools remains a

complex and contested field. Research pertaining to leadership in school organisations has investigated diverse aspects of organisational development and change, exploring the construction of relationships, the co-ordination of individual and collective behaviours (Seddon 1997), the differences between self-initiated and mandated change (Hargreaves 2004), the positive and adverse effects of principals sharing visions and vision-building plans (Southworth 1993; Thoonen et al. 2011), and learning-centred leadership, or instructional leadership (Bush 2013; Rhodes and Brundrett 2010). Sociological research, in contrast, has been critical of the education sector leaders' adoption of performativity and neo-liberalist rationalism towards education workforce outputs (Ball 1998), industry oriented gentrification and embodiments of corporate culture and 'new managerialism' in the organisational regimes of schools (Grace 2005), that values more market-entrepreneurial regimes (Clarke and Newman 1992; Du Gay 1996) and a code of surveillance appraisal systems, target-setting, and output comparisons (Muller 1998). However, there is also evidence which points to more inclusive, participatory and humanistic approaches in education (Connell 1997; Dudley and Vidovich 1995), the effectiveness of leadership in the ways leaders apply and demonstrate responsiveness to work contexts, the effectiveness of more distributed forms of leadership, and the effect this has on teacher motivation (Leithwood et al. 2008).

To these more egalitarian ends, effective leadership is concerned with how workforce learning processes evolve through organisational problem solving and decision making, and the profound ways schools can connect as a staff body. At the heart of this robust and effective organisational self-reflection, is the workforce wide application and shared understandings of how learning occurs. How schools detect and correct errors, miscommunication or bad decisions, as well as collectively celebrate successes, engage in problem solving, subdividing of problems and organisation of solutions so that decision makers can learn from their actions and adapt their decision making and behaviour accordingly is central to this process (Argyris 2005).

Distribution of Leadership

Distributed leadership in schools has been of significant interest to schools for several reasons. It has been seen as an effort to shift sources of leadership from the informal to the formal side of the organisation, to explicitly acknowledge the presence of such leadership so as to better understand workforce contribution to organisational functioning, as well as to align shared leadership with shared visions and goals (Leithwood et al. 2007; Southworth 1993). The concept of distributed leadership overlaps considerably with shared (Pearce and Conger 2003), participative (Vroom and Jago 1998), collaborative (Wallace 1988), and democratic (Gastil 1997) concepts of leadership. These overlapping concepts have, as Harris (2004) asserts, served to obscure the precise meaning of the term, rendering it a generalised phrase for various types of devolved, shared or dispersed leadership practice in schools. Spillane et al. (2001a) suggest that distributed leadership is best understood as “practice distributed over leaders, followers, and their situation, and incorporates the activities of multiple groups of individuals” (p. 20). This implies a social distribution of leadership where the leadership function is “stretched over the work of a number of individuals and the task is accomplished through the interaction of multiple leaders” (p. 20). This theoretical framing implies that the social context and the inter-relationships therein, are an integral part of the leadership activity.

The Problems of Distributed Leadership

Through the pooling of resources, distributed leadership may be an emergent property that equates with the human potential available to be released within an organisation. Whilst conceptually appealing, researchers have been critical of this confluence, its reliance on cognitive distribution across groups (Spillane et al. 2001b; Spillane and Camburn 2006), and its dependence on certain material, social and cultural artefacts situationally mediated within specific socio-cultural contexts (Rogoff 1990). Timperley (2005) illustratively outlines potential difficulties in personnel, arguing vulnerabilities in shared respect and authority, the diverse

and in-equal selection or realisation of expertise due to mal-aligned criteria and acknowledgement of diverse forms of knowledge. The work of Fitzgerald and Gunter (2007) further questions whether it is possible for “distributed leadership to occur in a policy climate that affords authority and responsibility for leadership and management to those labelled according to an established hierarchy” (p. 6).

Literature points to practical difficulties associated with distributing leadership in schools and its resultant conflict of priorities, targets and timescales across the workforce. Storey (2004) argues that boundary management issues and competing leadership styles can emerge that concern crossing structural and cultural boundaries that workforces in schools navigate daily, arguing there is often conflict and contradiction between perspectives and interests- whereby not all agents benefit equally. Criticism is also directed at the nature of distribution from a top-down approach that ensures that prior histories, ideological, and political climates can dominate individual thinking, which in turn can influence the shape, timing and severity of policy development and capacity for advantageous outcomes. Leithwood et al. (2007) further argue that distributed leadership regulates policy decisions within a complex social environment, where agendas may seldom intersect with local or even inter-subject interest and concerns. Organisational set ups of this kind may provide unpredictable consequences that allow certain networks within a school to misinterpret, exaggerate, or ignore contextual factors and the complex interrelationship between different and at times opposing interests. Such outcomes ultimately produce far from desired educational change, efficiency or understanding.

Thus, much depends on the way in which leadership is distributed, how it is distributed and for what purpose. Outlining shortcomings of attempts to utilise distributed leadership highlight the risk averse tendencies and biases towards the diversification and re-hierarchising of empirical views and understandings. They make evident how such problematising hallmarks can inhibit and resist evolution and educational change in schools, and that more profound leadership utilises the sharing of ideas and visions within equal and respectful frameworks of collaboration and enquiry.

Creativity and Leadership in Schools

One of the most significant advances in current education policy developments has been the acknowledgement of creative and critical thinking skills (ACARA 2013; Cho et al. 2011; Looney 2009; Lucas et al. 2013; Ministry of Education China 2012). Central to the implementation of creativity and critical thinking as an educational imperative, is how schools understand, promote, politicise, and implement leadership that supports the holistic adoption of creative thinking, and how they effectively nurture and develop it in students.

Discourses on creativity in education emphasise the promoting of creativity through the use of creative approaches to teaching (Harris and Jones 2014; Csikszentmihalyi 1996; Florida 2003), the recognising of complexity, context, and the collective, collaborative situatedness of activity (Borgo 2005, Craft 2008; Craft et al. 2012; Glăveanu 2014). Of further significance are the affordances creative environments and creative, interdisciplinary pedagogies contribute to creative mindsets that propagate creative ecologies of both students and teachers (Harris 2016; Harris and de Bruin 2017a, b).

A review of creativity in education (Davies et al. 2013) found that creative attitudes modelled by teachers influenced students' own attitudes to creativity, as did the high expectations and behaviours of teachers that supported creative processes in students. An international study of secondary schools by Harris (2016) found teacher-student learning relationships and creative pedagogical approaches and environments supported inter/multi- disciplinary teacher practices. Such creative pedagogical applications interconnected domains of learning that positively impacted on the creative capacities of learners (Harris and de Bruin 2017a; de Bruin and Harris, 2017a), and established creative ecologies within schools (Harris 2016, 2017).

In stark contrast to this, The Australian Parliamentary 'Inquiry into innovation and creativity: workforce for the new economy' (Commonwealth of Australia 2017) found limiting aspects of teacher pedagogy and knowledge in STEM approaches, and the need for holistic, inclusive and engaging applications such as STEAM education (science,

technology, engineering, arts, and mathematics) taught through interconnected whole-school approaches. An OECD inquiry into the role educational leadership plays in shaping positive learning climates found minimal variance towards positive student-teacher relationships due to distributed leadership employed in the school, and that currently “educational leadership does not influence the learning climate at school to a great extent”. (OECD 2016, p. 118).

Exposing this disjunction between school leadership, innovative educational advancements and teacher practices, Griffin (2013) argues that successful leadership questions assumptions and beliefs, stimulates new perspectives and ways of doing things, and encourages the expression of ideas. Transformational leaders seek new ways of working, find opportunities in the face of risk, and raise “the level of intellectual awareness about the importance of valued outcomes, by raising or expanding individual needs and by inducing a belief in transcending self-interest for the sake of the team or organization” (p. 145).

Successful leadership is thus more likely where people are involved in decision making through a transparent, facilitative and supportive structure, that interconnects subjects, ideas and practices, that doesn't separate subjects arbitrarily, but rather acknowledges creativities as a general capability threaded across all domains of learning. An emerging worldwide creative ‘turn’ in creativity (Harris 2014) is applying new thinking not only towards creativity in education, but to conceptualising the ways educational organisations can invest and coordinate in deep and critical thinking that dismantles subject silos and subject specific learning orientations. Understanding educational leadership that can unite its workforces and voices, we can utilise Gadamer as a lens through which we find a *truth in method* that constructs a ‘fusion of horizons’ within organisations (1989). To meet this educational need, teachers and administrators *together* must strive to create an education system in which there is an alignment between school policy direction, teacher practice, and shared understandings. Through deeper and more profound processes of collaboration and communication, a holistically considered, legitimate and authentic workforce collaboration and vision can be adapted to function as a critically reflexive mechanism by which learning and teaching practices, environments and shared leadership are improved.

How Schools and Organisations Engage with Change

Commonly organisations looking to improve and establish outcomes of objectives, implement change strategies and assess the results and manifestations of change against stated objectives. Distributed leadership strategies can be perceived to be successful are often frozen in place with the assumption they will emphatically enable permanent change. Alternatively, they may be adjusted to accommodate unforeseen eventualities, conditions or impediments. In a similar way, strategies can be analysed for their effectiveness and adjusted to meet desired outcomes. Such adaptive measures to organisational learning and change have been defined as what Argyris and Schön (1996) term ‘single-loop learning’, to which they contrast ‘double loop’ learning as a deeper and more comprehensive framework for change.

Single Loop Learning

Single loop learning is behaviour-based, and is the most commonly assumed method of effecting change. Activated within a cyclic nature of goal setting, objective, and strategy assessment, single-loop learning is dependent on the theory that altering strategies and objectives based on assessments, changes in individual and organisational behaviours will be consistent with the organisational needs and interests as well as those of the students. The limitations of substantive change in single-loop learning is the simplification and homogeneity of problems and issues across an organisational workforce, that focuses more on technical issues rather than interrogating values and assumptions and the need to evolve to meet current and future needs. Organisations can preoccupy meaningful change by acting defensively and distort information that limits the accurate reflection of what is really going on (Argyris 1986). Senge (1990) further problematises this form of action, arguing that the needs of individuals to protect themselves from getting negative feedback on the validity of their ideas/visions can be incorporated into group processes. As Senge contends (1990) “the more effective defensive routines are, the

more effectively they cover up underlying problems, the less effectively these problems are faced, and the worse the problems tend to become” (p. 254). Defensive routines are usually constructed in such a way that they are undiscussable- which implies that the most appropriate way of dealing with them is through insisting on superficial processes of analysis and enquiry. Routinised problem-solving within school educational reform operates on this level (Looney 2009).

Double Loop Learning

An alternative known as a double loop approach (Argyris and Schön 1996) importantly acts more deeply by evaluating the change initiatives that test the underlying assumptions on which goals, objectives and strategies are based. Organisations take the shift from ‘single-loop’ to ‘double-loop’ learning when it moves from simply performing to improving ‘how we do things’. Double loop learning becomes embedded when people not only reference rules, but also constructively challenge rote responses, construct alternative scenarios to play out likely outcomes, test promising new ideas, and replace old rules if new approaches produce more successful outcomes in practice McElroy (1999).

Single loop approaches focus on lower-level change. Such change actions present fewer perceived risks for individuals or organisations- such as engaging in critically reflective thinking and self- evaluation, and reflect on implications of data, values, and assumptions that challenge the status quo. Within single-loop contexts decisions are often arrived at by accepting assertions founded on hearsay and myth rather than fact, and they polarise discussion around defending longstanding practices because they are presumed to hold fast as universally accepted and commonly valued. Argyris and Schön (1974) further assert that workers within organisations associate behavioural strategies with their governing bodies’ ascribed values and tenets. Single-loop thinking within organisations- such as in schools, faculties or departments utilise strategies that control environments of discussion and conformity, and thus unilaterally protect the status quo by control. Anderson (1992) suggests single-loop thinking within organisations asserts a mindset of moving *away* from that which is

comfortable and familiar, rather than moving *towards* something better, thus limiting learning and progress.

Contrastingly double loop learning is not an ongoing process of knowledge creation and testing (Blackman et al. 2004). Within the current creativity in education context it is the process that is enabled when there is a mismatch, or problem, between expectations derived from the educational demands and expectations we perceive as valued and significant for 21st century learners, and the actual experiences learners are engaging with and learning from in today's classrooms. So, whilst double-loop learning appears an effective measure through which deeper learning and refinement can occur, it is reliant on mechanisms in place that challenge the accepted knowledge of what we understand to be true. Double loop learning requires a collective, concerted effort to disrupting limitations and deficiencies inherent in current directions that reduce, devalue and limit creativities within arts education. Without shared understandings and shared, ongoing commitment, there will be no development of the ideas and iterations between current practices, and what the criticality of double loop thinking and analysis can enact in our schools and education systems (Popper 1999).

Organisational and Educational Change in Context

To encourage whole school approaches to educational change, collective reflection on pervading politics towards developing holistic and more profoundly impactful creativity in education are necessary. Whole school thought to pedagogical and curricular applications can enlighten and empower teachers to gain knowledge and confidence across domains. Such development of multiple perspectives and understandings of varied subject domains can allow the dismantling of the siloed nature of much educational organisation and delivery of knowledge. Equipping teachers with new skills, insights and connections can enhance learning situations where students can exercise more control of their learning. It can allow students to explore interconnections between and across subjects, avail

students opportunities to work at their own pace and with peers- and with more incentivised teacher workforces. Double loop approaches can contribute to rethinking the way staff collaborate and stimulate dialogue around informed models of creativity in education. It can provide teachers with opportunities to develop their own creativity and engage educators and leadership in reflective professional enquiry that progress teaching as a profession.

Educational Applications of Double Loop in Practice

Research investigating double-loop processes within secondary schools can offer insights into how leadership and schools can better meet the needs and demands of 21st century education. Houchens and Keedy (2009) utilised qualitative inquiry of principle theories of practice, graphically illustrating or 'mapping' the linkages between a Principal's core assumptions about teaching, learning, and the Principal's instructional role and key action strategies for promoting higher levels of student achievement. The authors suggested that mapping theories of practice might be the first step in helping Principals become more reflective practitioners and building capacity for double-loop learning. Further devising a Principal-teacher teaching protocol, Houchens et al. (2012) found that Principals valued the structure, feedback, and reflective dimensions of the protocol, and developed increased confidence levels in supporting struggling teachers improve.

An Australian study of secondary school principals by Ikin and McClenaghan (2015) compared leadership activity and engagement between two separate collaborating groups. This study found that Principals who advised only as team members primarily engaged in single-loop learning, whilst Principals in the second group had to understand and apply criteria in the evaluation of their own schools, design evaluation strategies and techniques, and reflect critically on the quality of evaluation practices and capacities in order to improve the values and assumptions influencing their own practices. This group demonstrated engagement in an integrated and experiential learning cycle of experiencing, reflecting, thinking and acting, and hence double-loop learning.

Enhanced capacity of this latter group of Principals included new skills, knowledge and understandings that became embedded in the culture and practices of their schools.

Key aspects of the differences between single loop and double loop theory were exposed in this study, namely that through a group's double-loop-learning attempts to reach a goal, the group were able to modify the goal in the light of experience, or even reject the goal. Through single-loop-learning attempts, however, the group made repeated attempts at the same problem, with no variation of method and without ever questioning the goal.

Research by Peeters and Robinson (2015) analysing self-study of teacher behaviours, identified how teacher educators could become more aware of their theories of action, and of the implications for fostering the learning of teachers through double-loop approaches. In a study with three teachers, Walker (2007) examined how 'learning study' strategies could be used to facilitate their development. This strategy addressed the perceived ineffectiveness of "top down" approaches in teacher education by enabling teachers to take charge of their own professional development. Through linguistics, pronunciation and comprehensions tests of Japanese teachers negotiating English language, she identified the lack of honest communication of abilities, her desire to protect the participating teachers from embarrassment, and that her choice to keep her judgement of the teachers private limited her own learning- and the learning of the teachers. This study reveals the stark hallmarks of single-loop learning; protection of self and others by avoiding direct or indirect interpersonal confrontation or discussion of sensitive matters, and the assuming of control of the situation and the task, by making up decisions and acting on views, whilst keeping private to avoid public scrutiny.

A 'developing pedagogy' undergraduate teacher-education course cultivated by Berry and Loughran (2002) offers an insightful collaborative perspective of self-realisation and growth in peer-to-peer teacher interaction. Whilst jointly creating modules of learning, Berry identified how her desire to stay in control of the content and direction of her lessons sometimes prevented her from pursuing spontaneous teachable moments. Whilst her colleague, Loughran unexpectedly role-played a student inter-

action in a lesson, she noted how she was so intent on continuing her teaching that she quickly addressed the question in order to get on with what she had planned. Later analysing the event, she realised: “I didn’t pick up on the idea that we might capitalise on the moment as a teaching situation, because, at the time, I was not comfortable to look” (p. 18). Later reflection of this incident facilitated how she became increasingly open to these opportunities and less controlling because she learnt by utilising these teachable moments, she could support educational opportunities that were more powerful than those she had originally planned. This exemplifies double-loop learning because, rather than learning how to maintain better control of the lesson, Berry realised how her desire to keep control was limiting her ability to learn how to teach more effectively.

Both Tagg (2010) and Boyce (2003) investigated teacher practices and assessments of remedial learners, finding that teachers and institutions took single-loop approaches that focused on error correcting, and separating those who attained assessed minimum levels and those who didn’t. Such organisationally defensive routines- what Argyris (2005) labels ‘anti-learning and overprotective’ serves as a counter-productive function that not only undermines educational vision, but prevents the organisation from identifying the source of problematic issues and effecting meaningful and lasting change. Such progressively limiting and constraining workplace practices can work to foster and embed a deficit model amongst student cohorts. Critically understanding the whole governing structure in handling students’ remedial needs is what double-loop learning and strategies can do to improve fundamental values that drive organisational inquiry.

This research saliently exposes the value of double-loop learning and understanding, and asserts the public testing of assumptions, the free and informed choice making available through bilateral control of tasks, and shared commitment so people feel responsible for their choices. This evidence supports the foundational notion of how double-loop organisation and leadership can promote the development of how schools can embed evaluation into their practices as part of their routine organisation, planning and management.

Professional Learning Catalysts for Change

It is important to establish frameworks that promote and enable equal and transparent connections between knowledge systems in schools, to level power dynamics, to empower communities of practice, and also maximise the potential of knowledge synergies that foster a double-loop ecology. Developing procedures that define problems, the assessment process, and the evaluation of findings involving co-production and collaboration with relevant stakeholders from the onset is also important. Using indicators that make sense within a teaching community opens up the possibility to engage all agents and knowledge holders in the monitoring, reporting and development of shared goals as well as in the process of potentially refining shared leadership and learning.

Asserting and enabling double-loop action and reflection in action should be viewed and recognised as a process, and that the potential to find mechanisms for learning across “success stories” emerge from shared practice and learning. Schools may need to develop new and perhaps localised, context specific methods, tools and approaches for co-production of questions and issues. They may need to develop methods for mobilising, documenting and sharing knowledge and enriching understandings, as well as honing methods for the co-production of analyses and insights based on this enriched picture.

Perhaps the hardest part of any theory of action in educational change is not so much how to start it, but how to sustain it and make it spread. Highly prescriptive and aligned blueprints increase consistency but forgo depth, breadth and complexity. The challenge in schools is how to engage and utilise double-loop approaches, organisational practice and management that brings diverse people and perspectives together to work effectively for a common cause. Schools become more vibrant places by lifting and enriching not only students, but teachers personally and professionally, operating in confluence with colleagues and each other. To this end, five catalysts of change can be utilised by school leadership in order to effect positive, ongoing, and universal positive change.

Catalyst One *Sustainable double-loop ecology* develops pools and banks of knowledge amongst staff, from which high-level performers can emerge. It depends on developing lots of leadership early in teacher careers, but affords younger teachers collaborating and learning off experienced administrators within communities of practice in what can be described as a cognitive apprenticeship of sorts (Collins et al. 1991). Double loop action draws change out of staff, rather than dogmatically driving reform through them. It is an integral aspect to curriculum and pedagogical development, and offers perhaps more powerful change than prescriptive reform implementation and imposed targets.

Catalyst Two In many theories in action, improvement is unequal, patchy or fails to spread and sustain. This is because teachers in schools practise and learn best not by lectures or handouts, but by watching, listening and learning from each other. Operating within a safe network in which teachers can *operationally and pedagogically risk-take*, can allow teachers to develop and explore new ways of doing and being, as well as building new interdisciplinary relationships as well as share new knowledge with colleagues.

Catalyst Three Knowledge is distributed across networks, and the most effective of these occurs through an *organisational praxis* that synthesises properties of emergence (via spontaneous and unpredictable interactions) with properties of design that shapes interactions with direction and impetus. Too much emergence renders interactions diffuse and unclear, subjugating some members to the periphery of engagement. Too much design imposes an administrative impediment to substantive discourse and change, nullifying emerging ideas and innovations that may challenge mandated policies.

Catalyst Four Educational change that is *sustainable and democratic*, and that supports engagement, learning and assessment for all that uses a range of diagnostic testing that gives feedback on progress and problems that need addressing.

Catalyst Five *Top to bottom/Bottom to Top* development that retains top-down autocratic control severely defeats the purposes of establishing democratic and sustainable pathways. Such organisational design thinking (abduction, deduction and induction) can integrate with designerly ways by looking at the whole design process as a matter of meaning creation.

New perspectives of teacher practice and collaboration can potentially build responsible and aspirational professional communities that set high standards, shared targets and evidence with each other. By schools developing a robust social democracy, they are able to build an inspiring and inclusive vision that supports teacher leadership and professionalism. New leadership visions of this kind can establish a new orthodoxy that supports professional networks of improvement and enhances the social responsibility of education by directing energy and focus towards sustainable, democratic and effective educational change.

Of growing worldwide concern, is the way educational systems organise learners and future workforces within outmoded and obsolete models. In parallel to top-down hierarchic leadership approaches rests the continued propagation of learning cultures as socially enforced systems that inevitably condition learners to specific practices, thought, specificity of interactions and limited learning experiences. Such approaches shape constricting interpretations of the world, and how we seek to continue to learn in it. How schools successfully evolve and adapt, is dependent on their ability to jointly engage in specific innovations, processes of implementation and teacher development (Fullan and Hargreaves 1992).

By understanding and exploring the porous systems and interconnected construction of educational workforces, we can more deeply understand how Blackman (2008) ascribes: “bodies, knowledge systems, sociability and matter are co-constructed...the psychological, biological and social are discrete entities that somehow interact” (p. 131). Conceptualising this new materialist perspective of matter as praxis; thinking and doing as *pro*-active agency (Massumi and Manning 2014), we can focus on how this may shape evolving organisational development and how this might be applied *differently*. Organisational power and influence thus holds great impact upon members of organisations and

their actions; in their participatory relationships with power, how members internalise and reproduce this influence, and how they enhance each other and find evolution and difference through mutual entanglement and intra-action (Barad 2007).

Reconceiving Learning Through Arts and Creativity

Teachers are the ultimate arbiters of change, and are also often the initiators of change within their schools and classrooms. Yet, when transformational leadership works well, it has the potential to engage all stakeholders in the achievement of educational objectives. The aims of leaders and followers can coalesce as to assume a harmonious relationship and a genuine convergence of process, decisions, and outcomes. However, when 'transformation' is a code for imposing the leader's values, or for implementing prescriptive policy, then the process is political rather than genuinely transformational.

Arts education on a global scale is suffering from increasingly isolationist and marginalising perspectives that renders arts curricula an at times limited presence. Yet, the increased fascination with creativity as a general capability has marked it as a desired outcome from student learning as a general capability (ACARA 2016). This has redirected focus on the ways in which arts learning can improve student participation, increase critical, design thinking, and enhance creative capacities in students. Double-loop approaches and the 'creative turn' in education espoused by Harris (2014) facilitate the evolution of progressive and impactful creative ecologies within schools. Such organisational and leadership direction may just promote more deeply understood foundational engagement of creative practices and critical thinking. It can foster diversity through pluralist ideals, empathic intelligences through the valuing of multiple perspectives, and the utilisation of the arts and arts-based learning as an inter-disciplinary and cross-disciplinary prism through which deeper and more profound learning can occur.

Schools that engage with the catalysts for change articulated in this chapter can avail their learning communities to new models of diversification, integration and pedagogical insight and expertise. Such advancements can extend the way we teach and continue to learn as professional educators in secondary schools, and embed the ways creativity locates as a central cultural aspect of this learning experience. Embedding organisational and individual learning mindsets, Edmondson and Moingeon (1996) argue that learning *how* is just as important as learning *why* if dysfunctional interpersonal and organisational relationships and defence mechanisms are to be avoided. Schools may reconsider their mode of operation by examining the way they nurture and develop creative ecologies (Howkins 2009) and operate as eco-systems of knowledge transfer and behavioural development that organise and arrange networks of habitats where people change, learn and adapt.

Conclusion

How education policy, administration, schools and teachers implement structural and ideological change will shape the way and the extent to which our students meet the creative demands of this century. Double loop approaches promote and enable connections across knowledge systems in a respectful and equal manner. This approach stresses that complementarity and co-production should be part of a collaborative process between those involved from the onset. This focus on process may help to leverage the power dynamics, maintain integrity of shared knowledge systems, generate new questions, and thus enable an ecosystem of assessments and knowledge generation that are salient, credible, and legitimate for all contributors of knowledge. Understanding in more sophisticated ways how structural and developmental change can interconnect diverse domains of learning may neither be easy nor always comfortable. It can compel greater thought to the way teachers interpret curriculum and the ways they adopt, utilise and share *adaptable, sustainable creative pedagogies* that spark, engage and excite learning in students.

This chapter presents reforms that can be confrontational and perhaps controversial in their overarching schema of change. Whilst arguing for

the structural and philosophical leadership developments education should engage with might elicit levels of negativity, we must believe that fear of change can be transformed into genuine excitement and focus towards new possibilities. Through new conversations that are predicated to identifying key underlying assumptions- and their inherent failures, the principles described by Argyris and Schön (1996) can facilitate an expanded, inclusive and more connected vision of effective teaching and learning.

It is hoped that the view is shared, that without critical penetration of conceptual foundations that underlie such educational advancements, superficial and ornamental change will continue to masquerade as the fundamental overhaul that is needed. Innovation in education requires wider thinking that permits the revisioning of goals, aims and the ways we go about teaching and learning. Creativity in educational leadership can act as a powerful catalyst for growth. Leadership can recalibrate the ways schools operate by making central to education the criticality of 'possibility thinking', by compelling practical considerations to the 'what ifs', and providing the determination and courage to trial solutions that challenge or extend conventional ways of doing. By appropriately centring deeper levels of leadership, critical thinking can be applied as an interrogative aspect all too often absent from reform cycles. In doing so, not only can change ideas be addressed and implemented, but ongoing analysis of the results of implementation can be reviewed, and if need be, refashioned to optimum benefit. Education can learn from the many different kinds of reform occurring across other disciplines, glean these distinctions, and gain insights understood between superficial surface modifications and deep, paradigmatic changes and advances possible.

Secondary school learners of today and tomorrow will enter workforces and face very different societies, workplace demands, and more highly sophisticated awareness of interconnections between various products, industries and thinking. Our students deserve school systems, curricula and skilled teachers that can assure their readiness and success in those societies.

References

- Anderson, L. (1992). *Espoused Theories and Theories-in-Use: Bridging the Gap: Breaking Through Defensive Routines with Organisation Development Consultants* (Unpublished Master's Thesis). Brisbane: University of Queensland.
- Argyris, C. (1986). Reinforcing Organizational Defensive Routines: An Unintended Human Resources Activity. *Human Resource Management*, 25(4), 541–555.
- Argyris, C. (2005). Double-Loop Learning in Organizations: A Theory of Action Perspective. In K. G. Smith & M. A. Hitt (Eds.), *Great Minds in Management: The Process of Theory Development* (pp. 261–279). New York: Oxford University Press.
- Argyris, C., & Schön, D. A. (1974). *Theory in Practice: Increasing Professional Effectiveness*. San Francisco: Jossey-Bass.
- Argyris, C., & Schön, D. A. (1996). *Organizational Learning II: Theory Method and Practice*. Reading: Addison-Wesley.
- Australian Curriculum, Assessment and Reporting Authority. (2013). Australian Curriculum. <http://www.australiancurriculum.edu.au>. Accessed 20 Feb 2018.
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2016). Australian Curriculum General Capabilities/Critical and Creative Thinking. Retrieved from: <https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/critical-and-creative-thinking/>
- Ball, S. J. (1998). Big Policies/Small World: An Introduction to International Perspectives in Education Policy. *Comparative Education*, 34(2), 119–130. <https://doi.org/10.1080/03050069828225>.
- Barad, K. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. London: Duke University Press.
- Berry, A., & Loughran, J. (2002). Developing an Understanding of Learning to Teach in Teacher Education. In J. Loughran & T. Russell (Eds.), *Improving Teacher Education Practices Through Self-Study* (pp. 13–30). London: Routledge.
- Blackman, L. (2008). *The Body*. Oxford: Berg.
- Blackman, D., Connelly, J., & Henderson, S. (2004). Does Double Loop Learning Create Reliable Knowledge? *The Learning Organization*, 11(1), 11–27.
- Borgo, D. (2005). *Sync or Swarm. Improvising Music in a Complex Age*. New York: Continuum.

- Boyce, M. E. (2003). Organizational Learning Is Essential to Achieving and Sustaining Change in Higher Education. *Innovative Higher Education*, 28(2), 119–136.
- Bush, T. (2008). From Management to Leadership: Semantic or Meaningful Change? *Educational Management, Administration and Leadership*, 36(2), 271–288. <https://doi.org/10.1177/1741143207087777>.
- Bush, T. (2013). Instructional Leadership and Leadership for Learning: Global and South African Perspectives. *Education as Change*, 17(1), 5–20. <https://doi.org/10.1080/16823206.2014.865986>.
- Bush, T., & Glover, D. (2003). *School Leadership: Concepts and Evidence*. Nottingham: National College for School Leadership.
- Cho, N., Oh, E., Kwon, J., Kim, H., Chi, E., & Hong, W. (2011). *A Study on the Improvement of Secondary School Education to Bring Up Students' Creative Talents* (KICE Research Report). Seoul: Korea Institute for Curriculum and Evaluation.
- Clarke, J., & Newman, J. (1992). Managing to Survive: Dilemmas of Changing Organisational Forms in the Public Sector. In *Social Policy Association Conference* (Unpublished Conference Paper). University of Nottingham.
- Collins, A., Brown, J. S., & Holum, A. (1991). Cognitive Apprenticeship: Making Thinking Visible. *American Educator*, 15(3), 6–11.
- Commonwealth of Australia. (2017). *Innovation and Creativity: Inquiry into Innovation and Creativity: Workforce for the New Economy* (Parliament of the Commonwealth of Australia). Canberra: Gov't Printers.
- Connell, R. W. (1997). Schools, Markets, Justice: Education in a Fractured World. *Forum of Education*, 52(1), 1–13.
- Craft, A. (2008). Trusteeship, Wisdom and the Creative Future of Education. *UNESCO Observatory: Journal of Multi-Disciplinary Research in the Arts*, 1(3), 1–20.
- Craft, A., McConnon, L., & Matthews, A. (2012). Child-Initiated Play and Professional Creativity: Enabling Four-Year-Olds' Possibility Thinking. *Thinking Skills and Creativity*, 7(1), 48–61.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. New York: HarperCollins.
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative Learning Environments in Education—A Systematic Literature Review. *Thinking Skills and Creativity*, 8, 80–91.
- Day, C., Harris, A., & Hadfield, M. (2001). Challenging the Orthodoxy of Effective School Leadership. *International Journal of Leadership in Education*, 4(1), 39–56. <https://doi.org/10.1080/13603120117505>.

- de Bruin, L. R., & Harris, A. (2017a). Fostering Creative Ecologies in Australasian Schools. *Australian Journal of Teacher Education*, 42(9), 23–43. <https://doi.org/10.14221/ajte.2017v42n9.2>.
- Du Gay, P. (1996). *Consumption and Identity at Work*. London: Sage.
- Dudley, J., & Vidovich, L. (1995). *The Politics of Education: Commonwealth Schools Policy, 1973–1995* (Australian Education Review No. 36). Melbourne: Australian Council for Educational Research.
- Edmondson, A., & Moingeon, B. (1996). Organizational Learning as a Source of Competitive Advantage: When to Learn How and When to Learn Why. In B. Moingeon & A. Edmondson (Eds.), *Organizational Learning and Competitive Advantage* (pp. 17–37). London: Sage.
- Fitzgerald, T., & Gunter, M. (2007). *Teacher Leadership: A New Myth for Our Time*. Chicago: AERA.
- Florida, R. L. (2003). *The Rise of the Creative Class: How Its Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.
- Fullan, M., & Hargreaves, A. (1992). *Teacher Development and Educational Change*. London: Falmer.
- Gadamer, H. G. (1989). *Truth and Method* (J. Weinsheimer & D. G. Marshall, Trans.). New York: Continuum.
- Gastil, J. (1997). A Definition and Illustration of Democratic Leadership. In K. Grint (Ed.), *Leadership: Classical, Contemporary and Critical Approaches* (pp. 155–178). Oxford: Oxford University Press.
- Glăveanu, V. P. (2014). *Distributed Creativity: Thinking Outside the Box of the Creative Individual*. Cham: Springer Science & Business Media.
- Grace, G. (2005). *School Leadership: Beyond Education Management*. Bristol: Falmer Press.
- Griffin, D. (2013). *Education Reform: The Unwinding of Intelligence and Creativity* (Vol. 28). Cham: Springer Science & Business Media.
- Hargreaves, A. (2004). Inclusive and Exclusive Educational Change: Emotional Responses of Teachers and Implications for Leadership. *School Leadership & Management*, 24(3), 287–309. <https://doi.org/10.1080/1363243042000266936>.
- Harris, A. (2004). Distributed Leadership: Leading or Misleading. *Educational Management and Administration*, 32(1), 255–267.
- Harris, A. (2014). *The Creative Turn: Toward a New Aesthetic Imaginary*. Rotterdam: Sense Publishers.
- Harris, A. (2016). *Creativity and Education*. London/New York: Palgrave Macmillan.

- Harris, A. (2017). Creative Ecologies: Fostering Creativity in Secondary Schools Final Report. Retrieved from <https://www.creativeresearchhub.com>
- Harris, A., & de Bruin, L. R. (2017a). STEAM Education: Fostering Creativity in and Beyond Secondary Schools. *Australian Art Education*, 38(1), 54–75.
- Harris, A., & de Bruin, L. R. (2017b). Secondary School Creativity, Teacher Practice and STEAM Education: An International Study. *Journal of Educational Change*. Online First. <https://doi.org/10.1007/s10833-017-9311-2>
- Harris, A., & Jones, S. H. (2014). The Ethics, Aesthetics, and Politics of Creativity in Research. *Departures in Critical Qualitative Research*, 3(3), 186–195.
- Houchens, G. W., & Keedy, J. L. (2009). Theories of Practice: Understanding the Practice of Educational Leadership. *Journal of Thought*, 44(3), 49–61.
- Houchens, G., Hurt, J., Stobaugh, R., & Keedy, J. (2012). Double-Loop Learning: A Coaching Protocol for Enhancing Principal Instructional Leadership. *Qualitative Research in Education*, 1(2), 135–178. <https://doi.org/10.4471/qre.2012.08>.
- Howkins, J. (2009). *Creative Ecologies: Where Thinking Is a Proper Job*. St. Lucia: University of Queensland Press.
- Ikin, K., & McClenaghan, P. (2015). Modelling the Influences of Evaluation on School Principals: Towards Evaluation Capacity Building. *Evaluation Journal of Australasia*, 15(1), 19–27.
- Leithwood, K., Mascal, B., Strauss, T., Sacks, T., Memon, N., & Yashkina, A. (2007). Distributing Leadership to Make Schools Smarter: Taking the Ego Out of the System. *Leadership and Policy in Schools*, 6(1), 37–67. <https://doi.org/10.1080/15700760601091267>.
- Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven Strong Claims About Successful School Leadership. *School Leadership and Management*, 28(1), 27–42. <https://doi.org/10.1080/13632430701800060>.
- Looney, J. W. (2009). *Assessment and Innovation in Education* (OECD Education Working Papers, No. 24). OECD Publishing. <https://doi.org/10.1787/222814543073>.
- Lucas, B., Claxton, G., & Spencer, E. (2013). *Progression in Student Creativity in School: First Steps Towards New Forms of Formative Assessments* (OECD Education Working Papers). Retrieved from http://www.oecd-ilibrary.org/education/progression-in-student-creativity-in-school_5k4dp59msdwk-en
- Massumi, B., & Manning, E. (2014). *Thought in the Act: Passages in the Ecology of Experience*. Minneapolis: University of Minnesota Press.

- McElroy, M. W. (1999). Double-Loop Knowledge Management. *Systems Thinker*, 10(8), 1–5.
- Ministry of Education of China. (2012). The Twelfth Five-Year Plan for National Education Development. Retrieved from http://www.moe.edu.cn/public-files/business/htmlfiles/moe/moe_630/201207/139702.html
- Muller, J. (1998). The Well-Tempered Learner: Self-Regulation, Pedagogical Models and Teacher Education Policy. *Comparative Education*, 34, 177–193.
- OECD. (2016). *School Leadership for Learning: Insights from TALIS 2013*. Paris: OECD Publishing. <http://dx.doi.org.ezproxy.lib.rmit.edu.au/10.1787/9789264258341-en>
- Pearce, C. J., & Conger, C. (2003). *Shared Leadership: Reframing the Hows and Whys of Leadership*. Thousand Oaks: Sage.
- Peeters, A., & Robinson, V. (2015). A Teacher Educator Learns How to Learn from Mistakes: Single and Double-Loop Learning for Facilitators of In-service Teacher Education. *Studying Teacher Education*, 11(3), 213–227. <https://doi.org/10.1080/17425964.2015.1070728>.
- Popper, K. (1999). *All Life Is Problem Solving*. London: Routledge.
- Rhodes, C., & Brundrett, M. (2010). Leadership for Learning. In T. Bush, L. Bell, & D. Middlewood (Eds.), *The Principles of Educational Leadership and Management* (2nd ed., pp. 153–175). London: Sage.
- Robinson, V. M., Hohepa, M., & Lloyd, C. (2007). *School Leadership and Student Outcomes: Identifying What Works and Why* (Vol. 41). Winmalee: Australian Council for Educational Leaders.
- Rogoff, B. M. (1990). On the Meanings of Acts and What Is Meant by What Is Said in a Pluralistic Social World. In M. Brenner (Ed.), *The Structure of Action* (pp. 40–45). Oxford: Blackwell.
- Seddon, T. (1997). Markets and the English: Rethinking Educational Restructuring as Institutional Design. *British Journal of Sociology of Education*, 18, 165–186.
- Senge, P. (1990). *The Fifth Discipline: The Art and Science of the Learning Organization*. New York: Currency Doubleday.
- Southworth, G. (1993). School Leadership and School Development: Reflections from Research. *School Organisation*, 13(1), 73–87. <https://doi.org/10.1080/0260136930130107>.
- Spillane, J. P., & Camburn, E. (2006). The Practice of Leading and Managing: The Distribution of Responsibility for Leadership and Management in the Schoolhouse. *American Educational Research Association*, 22, 1–38.

- Spillane, J., Halverson, R. and Diamond, J. (2001a) *Towards a Theory of Leadership Practice: A Distributed Perspective* (Institute for Policy Research Working Article). Chicago: Northwestern University.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2001b). Investigating School Leadership Practice: A Distributed Perspective. *Educational Researcher*, 30(3), 23–28.
- Storey, A. (2004). The Problem of Distributed Leadership in Schools. *School Leadership & Management*, 24(3), 249–265.
- Tagg, J. (2010). The Learning-Paradigm Campus: From Single- to Double-Loop Learning. *New Directions for Teaching and Learning*, 123, 51–61. <https://doi.org/10.1002/tl.409>.
- Taylor, S., Rizvi, F., Lingard, B., & Henry, M. (1997). *Education Policy and the Politics of Change*. London: Routledge.
- Thoonen, E., Slegers, P., Oort, F., Thea, T. D., Peetsma, T., Femke, P., & Geijssel, P. (2011). How to Improve Teaching Practices: The Role of Teacher Motivation, Organizational Factors and Leadership Practices. *Educational Administration Quarterly*, 47(3), 496–536. <https://doi.org/10.1177/0013161X11400185>.
- Timperley, H. S. (2005). Distributed Leadership: Developing Theory from Practice. *Journal of Curriculum Studies*, 37(4), 395–420.
- Vroom, V., & Jago, A. (1998). Situation Effects and Levels of Analysis in the Study of Leadership Participation. In F. Dansereau & F. Yammarino (Eds.), *Leadership: The Multiple-Level Approaches* (pp. 145–160). Stamford: JAI Press.
- Walker, E. (2007). A Teacher Educator's Role in an Asia-Derived Learning Study. *Studying Teacher Education*, 3, 103–114. <https://doi.org/10.1080/17425960701284081>.
- Wallace, M. (1988). Towards a Collegiate Approach to Curriculum Management in Primary and Middle Schools. *School Organization*, 8(1), 25–34.



9

Creative Ecologies in Education: Teaching Relationships Within Sustained School-Based Artists-in-Residence Projects

Christine Hatton and Mary Mooney

Introduction

...art is like a muscle – it needs exercise to be strong (Student)

If, as this student says, art is a muscle, a living organism that requires exercise to build strength, then we propose that sustained artist-in-residence projects offer unique opportunities for living arts practice and creative ecologies to strengthen the school community. In this era of creative learning, partnerships between arts industry and schools that stretch beyond the short term open up new possibilities for organic and responsive educational ecosystems, which can transform people, practice and pedagogies whilst being responsive to the place of the local school.

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The features of a creative school ecology that develop engagement, artistic excellence and imagination emerged from a three-year funded research study of an arts education project called the *Fresh AIR Initiative*. Funded by the Australia Council and managed by Arts NSW (the State's arts agency), the initiative spanned three different projects over three years in six government schools involving multiple art forms, artists, teachers and students in primary and secondary schools. We examine how the impact of relationships between artists, teachers and students shape schools through a reciprocity of arts practice to develop a creative ecology.

Challenges of Measuring Creative Impact

Cultural and education sectors strive to innovate and create partnerships which showcase transformation, productivity and growth in difficult times. Holden (2009) argues that past conceptions of culture simultaneously supported two contradictory definitions. Firstly, that culture means the arts (high and low), with their own intrinsic value. Secondly, culture had anthropological meanings and was linked to the myriad of ways humans expressed and understood themselves (p. 448). In contrast, he says, the current context presents a new reality that shifts away from that outmoded binary and into a new three-way networked conception of culture which involves publicly funded culture, commercial culture and home-made culture. As a consequence, he argues, cultural interventions and the evaluation of them are becoming more complex. His work on types of value (intrinsic, instrumental and institutional) is very useful when considering the array of impacts in arts education partnerships.

Artists-in-Residence Projects and Their Impacts

In recent years, there has been increased government scrutiny and scholarly research into the features and impacts of artists in schools' programmes around the world. The heightened audit culture that pervades both the arts and education sectors has shifted the arts education partnership landscape, as stakeholders and researchers articulate the particular benefits of

partnerships between artists or arts organisations and schools. Evaluations of programmes and projects are scrutinised by arts agencies and stakeholders to assess the worth, value and impact of activities and initiatives. Funding cuts and marketisation have impacted both arts and education sectors, where new regimes of value are activated to justify political decision-making and the imposition of budgetary constraints. In Australia, current educational reforms 'foreground a creativity agenda ... but that it remains to be demonstrated, applied and evaluated in action' (Hunter et al. 2014, p. 78). There have been numerous studies around the world that have analysed the impacts and in models of artist-in-residence projects and arts education partnerships. A substantial body of this has developed out of the UK Creative Partnerships programme (2004–2011). The work of Thomson et al. (2012) and Hall and Thomson (2017) and other researchers (Parker 2013) have traced the multiple projects and impacts of this programme. This was an initiative that received extensive funding, support and political scrutiny in its operation. The research literature stemming from that initiative provides reference points for similar projects.

In our research of the NSW Fresh AIR Initiative we were drawn to theories of social ecology (Wright and Hill 2011; Hill 2011), Csikszentmihalyi's (1999) systems perspective of creativity, and Bronfenbrenner's theories of ecological systems (1979). When working in multiple school sites for three years involving over 1000 participants, we passed over mechanistic and causal ideas about value and impact and adopted ecological theories and models of analysis. We drew upon Harris's recent scholarship on creativity, creative education and creative ecologies (2014, 2016) to consider the complex agendas and relationships at the heart of our conceptualisation of a creative school ecology. In our research study the creative school ecology helped to conceptualise the layers of structure and the interrelationship of those layers to participants in the school AIR projects. The creative ecologies of these sustained residencies were characterised by rich creative relationships and a reciprocity of arts practice that was supported by interactions and the structures within the ecosystem. We propose that this ecological understanding of complex industry–school partnerships supports education, future design and policy making, particularly in the arts.

Design of the Artist-in-Residence Research

Fresh AIR (artists-in-residence) was a NSW partnership within the national AIR initiative managed by Arts NSW (now called Create NSW) in partnership with the NSW Department of Education and Communities (now called the Department of Education). The Australia Council provided \$450,000 over three years to fund the programme in NSW schools from 2014 to 2016 (\$150,000 per year). There were three projects in the NSW initiative. In addition to the funding the NSW Fresh AIR Initiative aimed to investigate best practice AIR models that could be implemented by other schools and arts organisations and it aimed to foster a network of AIR schools to support the on-going principles of AIR that become a sustainable part of schools' programmes.

The NSW Fresh AIR research (www.freshairresearch.com) studied three different artist-in-residence projects in government schools from 2014 to 2016. The study evaluated impacts of sustained artist residency models where selected artists were embedded in the school contexts for one term (model one), one year (model two), or for three years (model three). These different residency models shaped their design, management and implementation. The projects emphasised a variety of art forms such as visual arts, music and sound design, digital media and animation, dance, puppetry and spoken word arts. The first residency project in three secondary schools was a visual arts teacher designed and managed model, where nine visual artists worked in an embedded curriculum approach. This project is the focus of this chapter. The second residency project was designed and managed by a contemporary arts organisation and implemented in a single inner city K–12 community school. This project established a studio model of residency and employed artists from an Aboriginal and Torres Strait background. In the third residency project, a community arts organisation designed and managed the residency in two schools (one primary and one secondary). This project established a Room 13 model of artist-in-residence with one lead artist in both schools for the full three years with additional artists in each year.

This research study had two core aims, firstly, to evaluate the value and effectiveness of the input, process and output of three curriculum-aligned

school-based artist-in-residence projects, and secondly, to understand how the residencies build the creative and learning capacities of students, teachers and artists in a changing world. In light of these aims the following research questions were developed. This study sought to understand the following:

1. What impact do artist-in-residence (AIR) programmes have on student learning outcomes?
2. In what ways do AIR programmes develop teachers' professional practice and arts pedagogy in classrooms?
3. In what ways do AIR programmes develop artist's professional practice in classrooms?
4. What contribution and effect do AIR programmes have on value adding to school communities and the arts education of young people and their imaginative development?

This was a mixed methods study that drew upon qualitative and quantitative data to evaluate the projects and their impacts over three years. Data was collected through interviews with artists, school executive, creative arts advisors, arts organisation executive; focus group discussions with students, teachers, parents; ethnographic fieldwork observations of each project in each year; annual research workshop with teachers, artists, school executives, creative arts advisors and stakeholders; pre- and post-surveys with students, teachers and artists. Participants in this study were artists, teachers, students, parents, school executive members, arts organisations' executives and the education system creative arts advisors. A feature of the research approach was that of collaboration. Gattenhof (2017) suggests this is a more successful way to approach evaluative research so that the researchers can engage in generative conversations throughout the life of a project and even become a change agent within the project (p. 37). The annual collaborative research workshops designed and facilitated by the researchers were key to synthesising emergent findings year by year and also to lead key participants in self-evaluation, cross-project dialogue and collaborative planning for the following year. These research workshops provided opportunities for key participants to build the relationships and sustainability of their creative projects.

The data were analysed for indicators of impact on arts practice, learning processes and student learning outcomes. The methods of analysis involved comparing baseline pre-survey data to the post-surveys; analytic procedures to determine the pre- and post-data from artists, students and teachers for change and improvements in arts learning in schools when artists were in residence; and NVivo 10 (QSR International Pty Ltd. n.d.) coding of the qualitative data which generated ten research themes.

Describing the Case Study

The case study examines the first AIR project, which involved three secondary school sites from the same region in South Western Sydney. This residency model was designed by a cross-school team of specialist visual arts teachers with assistance from the system creative arts advisor. The teachers selected three artists each year (total of nine artists) who rotated between the three schools making and teaching art for a term in each school. The artists engaged in face-to-face teaching alongside the teachers and creating exhibitions of students' art work. Each artist also gifted one of their own artworks to each school which they created at that school. The artists also led teacher professional learning workshops in each school, after school hours or on weekends. The artists' work in the classroom was directly aligned to the visual arts curriculum for visual arts students in elective classes (14–18 year olds). The project design targeted these year groups to enhance student retention and capacity in the visual arts classes. The project design provided opportunities for gifted and talented arts students, which included workshops by the artists, exhibitions and partnerships with other artists, art galleries and the National Arts School.

School as a Creative Ecology

Harris (2016) argues for a more cohesive understanding of how creativity is nurtured in schools through a creative ecologies approach in which the whole school environment works together for creative change (p. 9). In

her recent research on creativity and creative learning in secondary education Harris built upon the work of Cho et al. (2011) to develop a broader more holistic creative ecology framework providing useful analytic tools to audit creativity education. In her research, she identified an ecology or a field of relationships in creative schools, which foregrounded the intersections between place, space and practices (p. 47). For Harris, creative school ecologies develop where the environment is a key factor for the enabling of creative practices to happen and expand. Ecological models and theories provide new ways to conceive how creativity might flourish in schools and potential ways residency projects can support creative ecosystems.

The Fresh AIR case demonstrates Harris's theories about creative school ecologies. In this example, we found that the school creative ecology has a systemic relationship to a creative ecological system. This system is identified by the interrelationships of the personal in response to the environment in which organisational cultures determine dependency, individualism, and creativity. In the classroom context, teacher-artist-student reciprocal artistic practices and creative pedagogical processes impact both the creative ecology and the participant learning outcomes.

Conceptualising the creative ecology of the AIR programme has been informed by Csikszentmihalyi's (1999) systems perspective of creativity where creative acts are shaped by time and place as individuals respond to domains and fields in culture and society. It is Bronfenbrenner's (1979) model of the ecological systems theory of human development that is adapted for this analysis. This provides an ecological framework from which to analyse the relationships between individuals and their environment their interactions to support the system. Bronfenbrenner proposed that the ecology is characterised by a series of nested structures that impact human development and the interactions of the individual with those structures. In the artist-in-residence case study, we outline what intersects or moves across the layers in the creative ecosystem, acting as intersecting vectors which impact the levels of the system. Bronfenbrenner later added the chronosystem outer circle to show how time mediated the experiences of the individual across the layers of the system. In our study of sustained residencies over three years, time allowed these intersections to develop and change, providing an opportunity for the researchers to

identify the key elements that contributed to the growth and maintenance of a creative school ecology. These are:

- arts pedagogies
- arts practices
- arts processes
- arts products
- arts audiences

Each layer of the creative ecological system in the AIR case study interacted in some way via these elements, which in turn impacted students and their creative development and engagement. The creative teaching relationships and the reciprocity of arts practice were critical factors in the development of the creative school ecology.

In sustained AIR projects in this study we found that the quality and development of core relationships between artists, teachers, students were key to the development of a school's creative ecology. The continued access to artists in sustained AIR partnerships strengthened and deepened the development of relationship as it provided the time to connect and engage, and strengthening the ecology to be responsive over time to change. Time to connect enabled transformation, empathy, self-awareness, everyday courage and artistic excellence to flourish in these schools. Both students and teachers benefited as they contributed and invested in the ecology.

In this case study, we found that the exposure to diversity of approaches, techniques and artistic sensibilities of nine artists over three years enabled students to develop their own imaginative capabilities and in turn, fostered in them new ways of seeing, being and connecting within their own school and their local context. In the three years, a new sense of purpose, artistic rigour and connection was made to self, community and place.

Using an ecological systems framework, the nested structures provide the conditions and the environment for creativity to flourish. In this study the creative spaces that developed in the three schools over time impacted not only those within the core AIR relationship (students,

teachers and artists) but also the relationships more broadly within the school and its community as well as the links with the arts industry and its audiences. In the residencies, the AIR teams worked to create an arts-rich environment which centred around the artist and their practice. The artists were accessible to students, teachers and other staff members. Our analysis concurs with Hall and Thomson's (2017) ideas of the way arts partnerships can present opportunities for the 'democratisation of culture and creativity' (p. 13).

The creative ecology that developed in this case study transformed and enlivened the arts pedagogy in the schools and engaged participants in new arts practices and processes. In this case, we found that the sustained relationships with the artists also left aesthetic and stylistic fingerprints on students and teachers (which were incorporated into their arts practices). The AIR project also impacted the broader environment of each school leaving the imprint of each artist on the physical space of the school as each artist over the three years gifted a work of art to each school.

Creative Teaching Relationships

Analysis of this study considered the development and impacts of the core three-way relationship of artists, students and teachers. Relationships in a creative school ecology are critical at all levels, particularly the micro and meso system levels (See Fig. 9.1). Here is where the relational and pedagogical work is at its most intense. In this study, we found that sustained AIR relationships enabled the development of deep relationships that were personal, aesthetic/artistic, conceptual/perceptual, technical, and cultural for the student participants. The core AIR relationship demonstrated new ways to weave imaginative connections between self, story, place and culture in the school's ecologies. Student relationships with artists enabled new conversations to occur. Artists asked questions of students to enable engagement and evoke personal and artistic responses, such as:

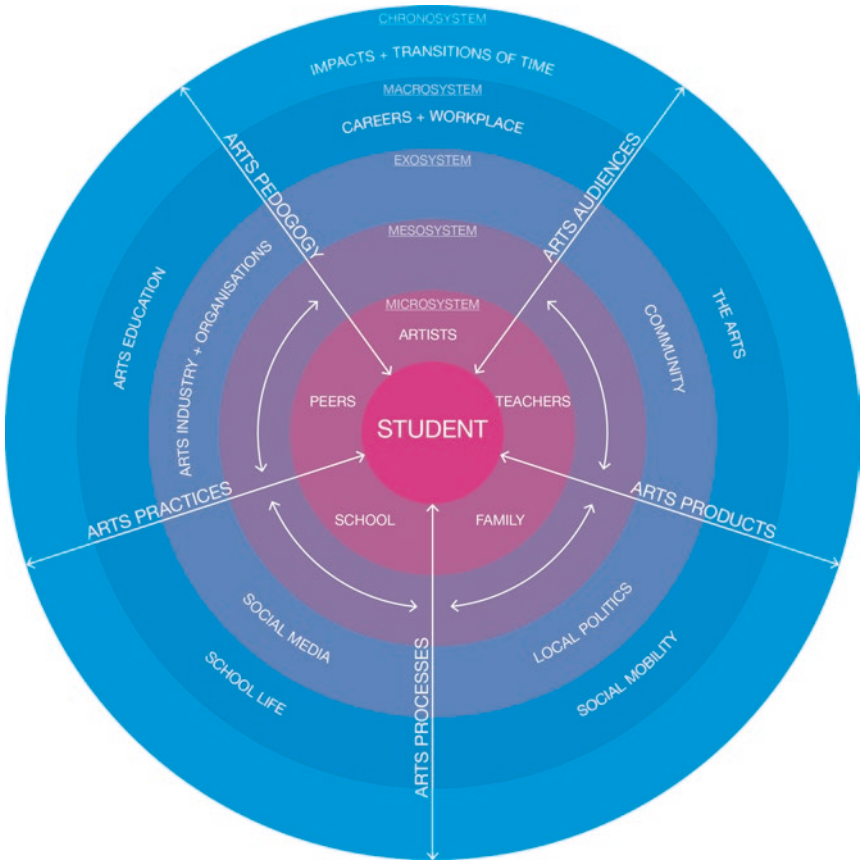


Fig. 9.1 A creative school ecology. (Adapted from the Ecological Theory of Development Bronfenbrenner (1979))

...who are you?...what do you see?...where are we?...what do we have at our fingertips...or in the grounds? ...why is it important to be comfortable with difference...what is the word for 'water' in your language?...

Through these questions the visual artists in this case study encouraged students to become more observant and artistically inspired by their own environment and microsystem. The artists acted as a catalyst when challenging students to engage with their own contexts, stories and responses to place using a variety of media and artistic techniques to make sophisticated art works.

Artist–Student Relationships

In artist–student relationships in this AIR case study we found that sustained engagement with the artists had a direct impact on students’ artistic risk taking. The artists helped students to move beyond fear and towards greater experimentation, meaning making and artistic and self-expression when making art works. For some artists, it was critical that the students work intuitively with materials and processes, teaching them to be open to the process of discovery. One teacher described that this way of learning was a challenge for her students, that ‘being creative is taking a risk and putting out there what’s in your heart and soul.’ In this way, the arts processes across the meso and micro systems (See Fig. 9.1) provided students with unique opportunities to learn about self and their perceptions about relationships within the wider creative ecology. The research findings of this project raised the stakes of arts education at the macro system in the culturally diverse school-life of the students and teachers across the three schools reframing their arts practices as creative and nurturing environments as spaces of welcome, exploration, experimentation, reflection and excellence.

Artists and students engaged in critical discussions about students’ art work and students reported they felt validated and encouraged by the artist’s feedback in particular. One student responded how she had learned to overcome difficulties in the arts process where the artists modelled persistence and an acceptance of what she called the “happy mistake”, where you end up with something fresh and unexpected through the experience of failure. Exposure to nine different artists over the three-year period exposed students to not only different media and practice but also gave them a unique opportunity to witness the artists’ approaches to problem solving at close range. Students reported they learned patience and persistence and that ‘...everything can be fixed with the right amount of paint’. Additionally, the opportunity to work in the style of the artists, using their media and techniques to create their own art works developed students’ skills, understandings and personal ideas about their own practice. This effect of student agency is evident across the macro and exo systems as students’ learned that they too could be artists engaging a variety of audiences through their own arts practice.

The researchers observed the embodied and artistic encounters of artists as they worked ‘with’ the students on art works, often moving students’ hands or directing their eyes to produce particular effects on their artworks. At other times the artists demonstrated techniques directly on the student’s work to give personalised instruction to assist the student. A number of students in this case study described the artists as rescuers, who helped just in time when they met a hurdle in their art making and how much they appreciated that. Most students enjoyed the chance to work in/with the practice of each artist, however a small number found it restrictive as it pushed them out of their comfort zones. In the students’ art works it was possible to trace the aesthetic fingerprints of each artist as styles, processes and techniques were adopted in student art works during the residency.

The students also demanded a robust pedagogical and artistic relationship with the artist, which at times challenged the artists to be more present and accountable:

I like teaching in ...every level, because I really like trying to explain things to people because it helps you explain it to yourself. [At the last school I was] being asked questions – quite blunt questions – about my own stuff by kids. You can’t really bullshit kids that much, so as soon as you start using big words – [it’s] ‘what are you talking about?’ Yeah, and they’re valid. So, I really like that. You drive home thinking – you have some kind of epiphanies. (Artist, year two)

A number of artists referred to the way the students challenged them to be more adaptable to meet the students’ needs and expectations. A key factor of this sophisticated core relationship between artist and student was the embedded quality of the artists in residence, which heightened the consciousness of their own art and place in a creative school ecology.

Some artists invited students to engage conceptually and aesthetically with the cultural contexts and meanings of their own art making. At times this involved direct cultural mentoring through the artistic processes of the residencies. As one artist commented:

I’ve looked at things like nationalism and xenophobia and the perception of Muslims in a contemporary Australian landscape – what’s going on now – with young migrants or children of migrants and that sense of dislocation and about

identifying those differences and coming to terms with it as opposed to being anxious or forming any type of anxiety about it, but being comfortable with that difference. (Artist, year two)

The artist explicitly worked on culture and the experiences of the students in these culturally and linguistically diverse schools and he was acutely aware of the part he played as a role model to students during his residency. He also wanted students to take pride in difference and develop their own voice and opinions through their own developing arts practice. In this way, the artists in residence created an artistic scaffold for students to connect with the wider world of politics, place and language activating the exo and macro systems of the schools creative ecology.

Artist–Teacher Relationships

During the residencies artists and teachers developed personal and pedagogical relationships which impacted the arts learning experiences of students but also affected teacher practice and professional learning. Their co-teaching and planning the artists and teachers' relationships directly contributed to the successes of the residencies. We found that artists and teachers engaged in mutually beneficial teaching partnerships that were founded on dialogue, reflection and shared decision-making, which indicated some of the features of quality in arts education (Project Zero, 2009) and enabled the development of a dynamic shared arts pedagogy. The teachers were enthusiastic about the way these artists breathed life into the curriculum and were appreciative of the artists' time and expertise to not only teach the students but the teachers as well.

Teachers, artists and students referred to the importance of role differentiation in the classroom. It became important for artists and teachers to know their different roles and responsibilities in the teaching partnership and find effective ways to work together and alongside each other for the benefits of the students and the learning experience. Most participants referred to more traditional differences relating to classroom management and assessment as being the teacher's responsibility and the technical or aesthetic areas being the artist's realm. These artist residencies

enabled the teaching partnership to develop and be negotiated over time. One artist commented:

...you're leading things, but you're not a teacher. It's a partnership. It is a partnership; you work together. (Artist, year two)

A key artist selection criteria was that the nine artists in this residency had prior experience in working in classroom contexts. The artists proved to be highly adaptable working across the three schools, liaising with different teams of visual arts teachers and school contexts. The flexibility of these nine artists to adapt and negotiate was critical to the establishment and maintenance of effective teaching partnerships. Not only did they have to be responsive to teachers and students, but they had to adapt their work to the other nested structures operational in the creative school ecology in each participating school.

The Reciprocity of Arts Practice

In this AIR case study, a key element in the development of the reciprocity of arts practice was the way practices and processes were shared and experienced within the core AIR relationship between students, teachers and artists. This case study illustrated that when teachers and artists work together in a sustained and embedded residency, innovative pedagogies and practices unfold, which both focus and transform student learning, experience and achievement. The reciprocity of practice that developed over time enabled roles and relations to be renegotiated where each group of participants were able to work across the five elements of the creative school ecology: arts pedagogies, practices, processes, products and audiences. At various times the artists worked directly as teachers, teachers worked as artists and students worked through processes and practices that positioned them as learners but also artists in their own right. A number of artists were challenged by students to be more present and engaged with the worlds of the students. This had a generative effect on the artists and spurred them to find processes and practices that led to student success. One artist stated:

It's their idea...and that thrills me. I mean they'll always succeed. I don't see any of them failing at the task, which is wonderful. I don't want anyone to feel they've missed out in any way. (Artist, year three)

The reciprocity of practice in sustained relationships raised the stakes of the arts in these schools. This impacted the way students in particular developed within the creative ecology over time and it also had a professional impact on teachers. One teacher said the residency became a “beautiful space to work in”, one that breathed life and rigour into the curriculum, making concepts and content ‘real’ to students so they could excel. The three-year sustained residencies also challenged the teacher’s professional practice in terms of curriculum design, assessment and face-to-face teaching. Teachers felt they had privileged access to the artist and the space to learn and experiment in the same way as the students. All the teachers in this case study referenced the way the core legacy of the Fresh AIR initiative for them was the imprint it left on their practice as specialist art teachers, where they could utilise what they had learned in order to teach in new ways in the future.

Some artists also found their relationship and exchange with the teachers impacted their practice as teaching artists by challenging them to engage with theory. In the second year of the project, one artist commented:

...But I've been really impressed with the theoretical knowledge that the teachers have. It's informed me. I've gone home and looked up stuff they've been talking about – I just nod and pretend [I] know what they're talking about and go home, look it up. It's quite amazing. I'd mention something and then they'd be like, 'all right guys, that's this person, these are their dates.' Just in noticing them in conversations with people and with me, they just have this far bigger knowledge of an art background. I suppose teaching art at this level, you really need to know your fundamental stuff. I've been really impressed with that, and not only that, but quite contemporary things as well. They've always gone off and seen something on the weekend, asked me what I've done – not much. (Artist, year two)

This artist was impressed by the teachers’ knowledge of and engagement with the arts world and was challenged to reciprocate, as concepts

or topics arose in the teaching context. More broadly, the effect of developing a professional and artistic relationship between artists and teachers through a shared pedagogy of arts practices and products. This critical relationship between artists and teachers positively affected the quality of student engagement and creative capacity.

Living Arts Practice in the Classroom

This study revealed the impacts of sustained artist-teacher-student engagements which developed schools as living creative ecologies responsive to change and innovation over time. The continuing presence of artists fueled the growth of a creative ecology within the school communities. The processes and pedagogies utilised through the core relationships in the residencies benefitted students and teachers in their enactment of curriculum during the three-year time frame of the residencies. Whilst teachers relished the opportunity to have successful contemporary artists in their classrooms making the curriculum come alive, the students also benefited from exposure to successful examples of arts practice. For students, the artists were real embodied examples of success as artists, where there was a real sense of the artists' living practice 'in the room'. Artists students and teachers all spoke about how this presence of the artist and their practice helped to work against stereotypes and codified ways of interpreting art in the curriculum. One artist said this ongoing presence was a key benefit to students in the project:

But I'm here and I have an arts practice and I think that in itself is an amazing example because [to] the students – I'm real. I exist in real time. I don't exist in a catalogue or a poster. So, I think that in itself is fantastic and not all students have that opportunity, but that's the great thing about this program. You've got living, breathing artists who are very diverse in their practice but also in their identity and for students then they can see, oh maybe I can be an artist, because I didn't think I could be an artist when I was growing up. Shock, horror, I became an artist. So yeah, breaking down those stereotypes of what an artist is and who an artist is, is great. (Artist, year three)

The artists' presence provided a portal to the wider world, the art world and the arts industry, linking the everyday classroom to the exo-system of the ecology (See Fig. 9.1). With the advantage of time in these sustained residencies students could make real world connections through their work with the artists and this had a direct impact on their aspirations. For students, the artist embodied possibilities, particularly for students who would not normally be permitted to consider being an artist as a career path. Access to the artists opened up possible futures and pathways for students that were previously out of reach or unthinkable. As one artist said:

It does make art a real career for them...my Dad wanted me to be a pharmacist at first, so for me to suddenly do art... it's a huge deal... it opens it up. It makes it real. It makes it tangible. It makes it possible for them. A lot of them have just been shocked... 'You're from Bonnyrigg and you're doing this?'
(Artist, year three)

Those artists who had lived in the same local contexts as the school or came from similar cultural or religious backgrounds to the students acted as role models and examples of successful artists' practice. The mentoring went beyond the aspirational and into the personal realm as the students got to know them as individuals and gain insights into their views and lives. One student said:

[The artists] have their own way of everything they do and it has to go from their life, something they relate to, [you] compare [it] to what they do in art making... So it's not just skills. You get to find out how a person lives and how it relates to everyone else. (Student, year three)

During the time of the residencies some of the artists involved celebrated considerable national and international success. In their practice, these artists provided a direct link to the contemporary art world, where students had access to practising artists who were dynamic mentors bringing the bigger picture of the commercial world into the small, local world of the classroom and learning. Students also saw directly how art-

ists engaged with broader discourses in arts, culture and politics. Artists in this project were well aware of how they provided links to the bigger picture of the social and arts industry and art world and that this was a unique opportunity for these students from the suburbs. The artists' residencies impacted students' creative agency by providing high quality mentoring and artistic scaffolding as students developed their own artistic voice and practice under the guidance and support of artists and teachers working together. Such a supportive creative ecology developed not only students' artistic skills and understandings but the courage to respond creatively to broader social, political and environmental contexts.

Conclusion

Creative ecologies thrive on acts of transformation and renewal, which are, as Roslyn Arnold wrote, '...the outcome of courage, confrontations with the ineffable and confidence in the worth of the quest' (2011, p. 169). These sustained residency relationships both thrived within and strengthened the creative ecologies in these three schools, enabling creative risk taking and opened up spaces for 'heart and soul', as one teacher reported, to be activated in the classroom. A key research finding shows that when artists are embedded in the curriculum as in this Fresh AIR model, the schools' creative ecosystems support individuals interacting imaginatively over time with their environment. These interactions cultivate a deep and complex layering of relationships between artists, teachers, students, schools, education system, the local community and arts organisations who connect with arts pedagogies, practices, processes, products and audiences. In this sustained artists in residence model, learning in a creative ecological system raises the stakes of arts engagement, aspiration and excellence for all participants.

References

- Arnold, R. (2011). Developing Wisdom: The Possibilities of a Transformative Education. In D. Wright, C. Camden-Pratt, & S. Hill (Eds.), *Social Ecology: Applying Ecological Understandings to Our Lives and Our Planet* (pp. 165–172). Stroud: Hawthorn Press.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Cho, N., Oh, E., Kwon, J., Kim, H., Chi, E., & Hong, W. (2011). *A Study on the Improvement of Secondary School Education to Bring Up Students' Creative Talents* (KICE Research Report). Seoul: Korea Institute for Curriculum and Evaluation.
- Csikszentmihalyi, M. (1999). Implications of a Systems Perspective in the Study of Creativity. In R. Sternberg (Ed.), *Handbook of Creativity* (pp. 313–335). Cambridge: Cambridge University Press.
- Gattenhof, S. (2017). *Measuring Impact: Models for Evaluation in the Australian Arts and Culture Landscape*. London: Palgrave Macmillan.
- Hall, C., & Thomson, P. (2017). *Inspiring School Change*. London: Routledge.
- Harris, A. (2014). *The Creative Turn: Toward and New Aesthetic Imaginary*. Rotterdam: Sense Publishers.
- Harris, A. (2016). *Creative Ecologies: Fostering Creativity in Secondary Schools*. Melbourne: Monash University.
- Hill, S. B. (2011). Social Ecology: An Australian Perspective. In D. Wright, C. Camden-Pratt, & S. Hill (Eds.), *Social Ecology: Applying Ecological Understandings to Our Lives and Our Planet* (pp. 17–30). Stroud: Hawthorne Press.
- Holden, J. (2009). How We Value Arts and Culture. *Asia Pacific Journal of Arts & Cultural Management*, 6(2), 447–456.
- Hunter, M., Baker, W., & Nailon, D. (2014). Generating Cultural Capital? Impacts of Artists-in-Residence on Teacher Professional Learning. *Australian Journal of Teacher Education*, 39(6), 75–88.
- Parker, D. (2013). *Creative Partnerships in Practice: Developing Creative Learners*. London: Bloomsbury.
- QSR International PTY LTD. (n.d.). What Is NVivo? Software That Supports Qualitative and Mixed Methods Research. Retrieved from <http://www.qsrinternational.com/nvivo/what-is-nvivo>

- Seidel, S., Tishman, S., Winner, E., Heltland, L., & Palmer, P. (2009). *The Qualities of Quality: Understanding Excellence in Arts Education*. Cambridge, MA: Project Zero, Harvard Graduate School of Education..
- Thomson, P., Hall, C., Jones, K., & Sefton Green, J. (2012). *The Signature Pedagogies Project: Final Report*. Newcastle: CCE. Available at: http://www.creativitycultureeducation.org/wp-content/uploads/Signature_Pedagogies_Final_Report_April_2012.pdf
- Wright, D., & Hill, S. B. (2011). Introduction. In D. Wright, C. Camden-Pratt, & S. Hill (Eds.), *Social Ecology: Applying Ecological Understandings to Our Lives and Our Planet* (pp. 1–13). Stroud: Hawthorne Press.

Part III

Practice



10

The Antecedents and Outcomes of Creative Cognition

Sarah Asquith, Xu Wang, and Anna Abraham

A Brief Introduction to the Empirical Study of Creativity in Psychology

In determining the factors that aid or impede creativity, the emphasis in psychological research has predominantly been directed at uncovering the manner in which a range of variables, both individual and environmental, increases the propensity for creative potential or the likelihood of creative achievement. Other perspectives are concerned with the degree to which creative potential or creative engagement predicts other post-cognitive outcomes. While the bulk of this research has focused on the value of creativity as a predictor of academic success, over and above measures of intelligence, other outcomes such as wellbeing have also been examined, albeit to a far lesser degree. The aim of this chapter is to give a concise summary of the antecedents and outcomes that are associated

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with creative potential and creative achievement, and also the outcomes of creative practice and engagement with the arts.

Within the literature, creativity is defined as the ability to produce something that is both novel or original, and useful or of value (Runco and Jaeger 2012). Of course, the magnitude of creativity may vary considerably, and the levels of creativity are often divided into Big-C and little-c creativity, where Big-C creativity involves significant and singular creative achievement recognised by society, and little-c refers to the everyday creativity which is a capacity that every individual can engage (Kozbelt et al. 2010). Kaufman and Beghetto (2009) have added intermediate categories of Pro-C and mini-C creativity to this model, where Pro-C refers to the output, for example, of professional artists, and mini-c is creativity that is subjective and meaningful to the individual, such as seen in young children. The assessment of creativity may focus on creative achievement, or the outputs or products of creative activity. The Consensual Assessment Technique (CAT; Amabile 1982) is an example of an assessment of creative achievement, which combines the independent subjective assessments made by an appropriate group of judges to arrive at an overall rating of creativity of a product. The Creative Achievement Questionnaire (Carson et al. 2005) is a self-report questionnaire which assesses achievement across ten domains of artistic and scientific creativity. An alternative approach is to look at creative potential, by studying aspects of personality, intelligence and cognitive processes that are associated with creative achievement.

Within this approach, Guilford (1967) described two key processes involved in creative cognition: divergent thinking and convergent thinking. Convergent thinking is the process involved in finding the single correct solution to a problem, and divergent thinking involves generating many possible alternative solutions (Cropley 2006). Convergent creative thinking is most commonly tested using the remote associates test (RAT; Mednick 1962). Divergent creative thinking can be tested in a number of ways (Abraham and Windmann 2007), and responses are commonly evaluated based on fluency or the number of ideas generated, originality or the uncommonness of those ideas, flexibility or the number of different categories of responses, and elaboration or the level of details associated with an idea. The Alternate Uses Task (Guilford 1967) is an example

of a divergent thinking task in which participants generate different uses for a common object such as a newspaper. A helpful theoretical framework within which to contextualise different approaches to the study of creativity are the “four Ps” which reflect the process, product, person, and place/press (i.e. environment) (Rhodes 1961; Runco 2004). The first part of this chapter will focus on the latter two of these, to explore how they contribute to creative cognition. The second part of the chapter will consider outcomes associated with creative cognition and creative practice that are particularly relevant to young people in education.

Individual or Dispositional Factors

This section will discuss individual or dispositional factors that may contribute to the individual’s creative potential or achievement, focusing on intelligence, personality, and executive functions, finishing with a brief analysis of neuroscientific research into creativity. As the discussion will show, understanding the creative mind requires an understanding of the complex interplay of cognitive, personality and physiological factors.

Intelligence

Debate about the relationship between creativity and intelligence has a long history within Psychology, specifically in terms of whether creativity is an aspect of intelligence, or a separate construct. Guilford’s (1967) Structure of Intelligence model proposed that creativity was a facet of intellectual functioning, as did the Cattell-Horn-Carroll (McGrew 2009) model of intelligence where it is a component of fluid reasoning (J. C. Kaufman 2009). Threshold theory (Barron 1961; Guilford 1967) proposes that there is a relationship between creativity and intelligence up to a particular level or threshold, corresponding to an IQ score of 120, but above that level it is possible to be highly intelligent without being commensurately highly creative. However, a meta-analysis by Kim (2005) of 21 studies which included children and adults found that the relationship between creativity and IQ scores was negligible and the evidence did

not lend support even to a threshold criterion of 120. Kim's meta-analysis also found differences in the relationship between creativity and IQ scores across different creativity tests. The manner in which an activity is framed may therefore affect creative performance.

Jauk et al. (2013) suggested that the relationship between intelligence and creativity depends on the type of creativity measure being evaluated. For ideational fluency in creativity, a significant positive relationship was found but only up to an IQ score threshold of 86. However, for ideational originality in creativity, the threshold was found to be higher at 104 points for creative potential when measured by the originality of each participant's self-selected top 2 ideas, and 119.60 points when measured by average originality of all their ideas. A longitudinal study by Karwowski et al. (2017) investigating the relationship between intelligence at 11 years of age and creative achievement 41 years later at age 52, supported the idea that high creative achievement is unlikely with low intelligence, but highlighted that intelligence is a necessary-but-not-sufficient condition for creative achievement. They suggested other potential moderators and mediators, such as personality, motivational and social factors, need to be taken into account when considering the relationship between creativity and intelligence, and that these factors may operate differently in the artistic, scientific and everyday domains. It is therefore reasonable to conclude that while there is an association between intelligence and creativity, the type and extent of the association depends on which aspect of creativity is being measured. There is also the necessity to concomitantly consider other relevant individual and environmental factors that play a role in the context.

Personality

Alongside the evidence for threshold theory in their study, Jauk et al. (2013) also found that personality variables were a factor in the relationship, specifically, two aspects of the Big Five model (Costa and McCrae 1992) – openness and conscientiousness. Openness to experience refers to imagination, intellectual curiosity and willingness to consider new ideas, whereas conscientiousness refers to self-discipline, control,

efficiency and organisation. While openness to experience predicted creative potential in the sample of participants above the IQ score threshold of 104 points, creative potential was associated with lower levels of conscientiousness at lower IQ levels. This largely fits with the broader consideration of the influence of personality on creativity. Using all dimensions of the Big Five personality model, Feist (1998) examined the creative personality in artists and scientists in a meta-analysis and found “the largest effect sizes... on openness, conscientiousness, self-acceptance, hostility and impulsivity” (p. 290). A second-order meta-analysis by da Costa et al. (2015) found a positive correlation between creativity and openness, extraversion, and to some extent emotional stability, and a slightly negative relationship with conscientiousness and agreeableness.

The relationship between creativity and openness to experience is among the most consistent findings in the literature (Feist 2010). Kandler et al. (2016) suggested that openness supports creativity in three ways; by allowing more information into the focus of attention, by allowing new and unusual information and experiences to feed into the creative combining processes, and by enabling development of knowledge and expertise. S. B. Kaufman et al. (2016) showed that the two aspects of openness, openness to experience, and intellect, are differentially associated with domains of creative enterprise. Here, ‘openness to experience’ refers to cognitive engagement with fantasy, perception, aesthetics and emotions, and ‘intellect’ refers to cognitive engagement with abstract and semantic information. They found that openness to experience predicted achievement in the arts domain, whereas intellect predicted achievement in the science domain. Kirsch et al. (2016), on the other hand, confirmed the importance of openness for creative potential in the general population, that is, for everyday creativity, but not for artists and scientists. Hong et al. (2014) with a group of adolescents examined the relationship between creative activities and accomplishments and two aspects of personality (openness and conscientiousness), two motivation constructs (creative self-efficacy and intrinsic motivation), and perceived intellectual ability. The domains under study were music, visual arts, creative writing, science and technology. Openness was related to creative activities in all the arts domains but not to science and technology. Creative self-efficacy was related in all the domains apart from technology, whereas intrinsic

motivation was related to creative activities in the visual arts and science and technology. Conscientiousness and perceived intellectual ability were not related to creative activities in any domain.

So the general picture thus far is that openness to experience is consistently linked to high creativity but the specifics regarding its impact on domain-general and domain-specific creativity are less clear. Indeed, Batey and Furnham (2006) commented that the study of the relationship between creativity and personality is complicated by the diverse range of measures that have been used to assess both. Their conclusion is that the fulfilment of creative potential depends not just on particular personality traits but also on other cognitive and situational variables, such as intelligence and the social environment, and on the domain in which it is expressed.

Executive Functions

Executive functions describe a set of goal-directed mental processes of which the primary operations include inhibitory control, working memory and cognitive flexibility (Diamond 2013). Inhibitory control refers to the ability to control thoughts, attention, behaviour and emotions, and to resist interference during goal-directed thought. Working memory is the ability to hold information in one's mind and to manipulate it in service of a goal. Cognitive flexibility reflects the ability to shift perspectives and adjust to new demands or rule sets. Executive functions begin developing early in life, are sensitive to environmental factors, and can be improved at any age (Diamond 2013).

These primary operations of executive functions have been examined in relation to their impact on creative potential and achievement. Nusbaum and Silvia (2011) conducted a study into the role of executive switching and intelligence on creativity and reported a mediating effect of executive switching on the relationship between intelligence and creativity. De Dreu et al. (2012) looked at creative insight problems, musical improvisation, and original ideation and found that working memory predicts insight and originality as well as fluency, beyond general intelligence, and suggested that it does so because it enables persistence, rather than cognitive flexibility.

Of all the executive functions, inhibitory control has been most widely studied with regard to creativity (Martindale 1999). Three different views have been suggested about the relationship between creativity and inhibition (Benedek et al. 2012): firstly, that divergent thinking is related to higher cognitive control and the ability to suppress an obvious response (\uparrow creativity, \uparrow inhibition); secondly, that creative people are characterised by a lack of inhibition (\uparrow creativity, \downarrow inhibition), and thirdly, that creative people may be able to flexibly focus or defocus their attention (\uparrow creativity, \uparrow & \downarrow inhibition). Their evidence supported the first view with a positive correlation between inhibition and self-report measures of creativity as well as ideational fluency and flexibility in divergent thinking (\uparrow creativity, \uparrow inhibition). They suggested that the ability to suppress interference from salient ideas and responses that have already been produced facilitates the fluency of new ideas.

Carson et al. (2003), on the other hand, reported evidence for the second view (\uparrow creativity, \downarrow inhibition). They investigated the relationship between creativity, intelligence, and latent inhibition (LI). Latent inhibition is the ability to ignore information that is irrelevant to the current goal, and has been associated with individuals with or susceptible to schizophrenia. They found that high creativity, in terms of high scores on the CAQ and high originality scores from a DT task, was associated with low LI. They suggested that high IQ may moderate the effects of low LI in such a way that rather than being expressed as a deficit in attention, it facilitates creativity. Radel et al. (2015) also found confirmation of this view as the experimental induction of disinhibition was accompanied by greater ideational fluency. Still others have highlighted that the relationship between inhibition and creativity is best conceived of in terms of an inverted-U function and needs to take into account discrepancies in contextual factors that are elicited across creativity tasks (Abraham 2014a, b). The literature therefore suggests that the relationship between inhibition and creativity is a complex one as it is influenced by the type of inhibition and the aspects of creativity being tested. Indeed, the dual pathway to creativity model suggests that there are multiple routes to creativity via cognitive flexibility and/or cognitive persistence as a function of dispositional and situational factors (Nijstad et al. 2010).

The complexity of charting the information processing mechanisms of creativity from a psychological perspective is also reflected in investigations of the same from a neuroscientific perspective (Abraham 2018). Global/brain network approaches to understanding of neuroscientific brain functions in individuals reveal that two expansive brain networks, the default mode network and the central executive network that are typically engaged in processes of internal imaginative mentation (e.g., daydreaming) and goal-directed cognition (e.g., working memory) respectively, are jointly recruited during creative ideation. Moreover, local/brain region approaches that examined specific creative cognitive operations such as creative imagery, insight and conceptual expansion among others, reveal that the engagement of the brain regions within these and other brain networks are differentially recruited as a function of the type of operation in question. There is, therefore, a demonstrable need for investigations of creativity in relation to individual or dispositional factors (personality, cognition and physiology) to move beyond simple linear examinations of circumscribed variables if the aim is to arrive at an accurate understanding of the creative mind.

Environmental or Situational Factors and Motivation

The need to consider the role of environmental factors on creativity has been highlighted by several theorists. Sternberg and Lubart's investment theory (1992), for instance, proposes that a creative idea is one that is out of sync with the prevailing ideas and is therefore likely to be undervalued. The reception of the creative idea is therefore influenced by the environmental factors and its creator must work to 'sell' the idea to others. In addition to intelligence, knowledge, thinking styles (specifically the desire to see things in new ways), personality, and motivation, environment was outlined as one of the six resources that are essential for creativity. The environment should be conducive to the generation of new ideas, supportive, and provide evaluation and correction. This section will consider motivation, the effect of factors in the environment on motivation, and other aspects of the environment that may affect creativity.

Intrinsic and Extrinsic Motivation

Teresa Amabile has argued that the considerable focus on individual personality differences in the study of creative behaviour has overlooked the influence of the environment on that creative behaviour (Amabile 1996). Intrinsic motivation, or the desire to perform an activity for its own sake, is an important aspect that explains individual differences in relation to creativity. Initial research suggested that intrinsic motivation is positively related to creativity whereas extrinsic motivation, which is motivated by reward, evaluation or competition, is negatively related to creativity. A study of intrinsic and extrinsic motivation in children (Hennessey and Amabile 1988) found that children who were promised a reward for a story-writing task produced stories that were rated as less creative than the children in the no-reward condition.

However, later research has revealed a more complicated relationship between extrinsic motivation and creativity. Although it might be anticipated that the expectation of evaluation would undermine creativity, research suggests that the effect may differ for the technical and creative aspects of the performance, in that technical aspects may be enhanced by the expectation of evaluation, whereas creative aspects may be negatively affected. The effects of evaluation may also depend on certain individual differences, initial interest in the activity and skill level, and whether the evaluation is expected to be informational or critical (Amabile 1996). There is also evidence of gender differences in relation to these effects. Baer (1998), for instance, studied middle school children and showed declines in creative performance among girls in a collage-making task when an extrinsic motivator was introduced in the form of an evaluation or a reward whereas the creativity of the boys was unaffected.

Amabile (1996) also makes a distinction between algorithmic and heuristic aspects of creative performance. Algorithmic tasks have a clear goal and require following a linear or incremental path to finding the solution. Heuristic tasks, in contrast, often require defining the goal of the task itself and the problem solving process is non-incremental, and are often associated with divergent thinking processes and insight. Extrinsic factors, such as reward and the expectation of evaluation, may enhance algorithmic aspects of performance, but have a negative or neu-

tral effect on heuristic aspects. Indeed, Amabile (1979) found that the creative aspects of a collage-making task were more affected by the expectation of evaluation than the technical aspects. Ariely et al. (2009) reported a similar effect of reward on performance. When faced with a mechanical task, performance was better under conditions of high compared to low financial incentives. However, the reverse pattern was true in the case of a cognitive task.

Similarly, the effect of an external reward on creative performance is a complex one. The effects of reward on creative performance may differ if the participant has a choice of whether to do the task, and how to do it. It may also depend on the salience of the reward, and whether the reward is perceived as more enabling or informational about competence, than controlling (Amabile 1996). It is therefore too simplistic to conclude that intrinsic motivation has a positive relationship with creativity and extrinsic motivation a negative one. The direction of the association varies as a function of the nature of the task and is influenced by individual differences as well as by conditions of reward and evaluation.

Family, School and Culture

Although the effects of reward on creative performance have been extensively studied, other factors that have been found to reduce creativity include a range of constraints such as the setting of deadlines, surveillance, competition and evaluation (Hennessey 2015). Hennessey has argued that although explanations of the effects of these constraints has tended to focus on the individual, the expression and effect of these differences depends on the local and larger cultural setting, in terms of the values and norms of the culture.

Dai et al. (2012) have suggested that traits that are important for creativity are nurtured in early childhood and affected by the social and educational environment in adolescence. They suggested that children growing up in a high socio-economic status (SES) environment may have the opportunity to participate in a variety of intellectual activities, and be encouraged to express personal characteristics relevant to creativity, through school and parental influences. Their study found higher diver-

gent thinking scores in 8th grade students from a school in a high SES neighbourhood in the USA, when compared to students at a school in a lower SES urban neighbourhood with higher proportion of students living in poverty. They suggested therefore that parental and school investment has the potential to enhance the development of creativity. Deng et al. (2016) evaluated how the effects of environmental variables may vary by culture across groups of American and Chinese college students. Creative achievement for both groups of students was predicted by having parents who valued independence, happiness and openness in raising their children alongside a high school environment which encouraged creativity. However, the effects of environmental factors were mediated by different individual difference variables for the American and Chinese students. Creative attitudes and divergent thinking mediated the effects of parental values on creative achievement for American students, and openness mediated the effect of high school environment for Chinese students. These studies suggest that the school, neighbourhood and cultural context can affect the development and expression of creativity and that it is possible to enhance them by investing in these aspects of environment.

Understanding the creative mind requires getting to terms with the complex interplay between cognitive, personality and physiological factors. Creative behaviour may also be influenced by the presence of motivating factors in the environment and enhanced by the family, school and other social contexts. The next section will consider why we should be concerned with the enhancement of creativity, by looking at the positive outcomes that are associated with it. In doing so, an overview of the outcomes of creativity will be provided from two standpoints: the outcomes that are associated with measured levels of creative potential or achievement, and the outcomes of engagement in creative activity or practice.

Outcomes of Creative Cognition

This section will focus on two key outcomes that are relevant to young people in education, firstly, the association between creativity and academic achievement, and secondly, wellbeing.

Academic Achievement

When considering positive outcomes associated with higher levels of creativity in children and young people, academic performance is of special interest. Gajda et al. (2017) have suggested that creativity and academic achievement are related because creativity and learning are related, and both involve change; specifically, that aspects of creative cognition such as fluency, flexibility, originality, and imagination contribute to learning. Their meta-analysis found a modest but significant positive association between creativity and academic achievement, and this relationship was stronger when creativity was measured by creativity tests rather than self-report measures, and when academic achievement was measured by standardised scholastic aptitude tests rather than grade point average (GPA). The authors postulated that the strength of the relationship may have been limited by the predominant use of divergent thinking measures, which tap into only select parts of the construct of creativity, and that the weaker relationship with GPA scores reflects the consideration that features of the classroom environment and teacher expectations may subtly discourage the expression of creativity. They also found a larger effect size for the relationship between creativity and academic achievement in middle-school students compared to both elementary students, and high school and university students. The authors suggested that these differences may be explained by the development of thinking skills in children of middle-school age, and the increasing specialisation of learning in higher education.

Berlin et al. (2016) explored some of the factors raised in Gajda et al.'s (2017) meta-analysis, specifically, exploring the associations between different types of creativity and actual grades by subject (awarded by the teachers in school) as well as performance on a national school test in the 9th grade (14–15 year olds, in a French suburban secondary school). Creative potential was measured using divergent-exploratory and convergent-integrative thinking tasks in two domains, verbal and graphical. There was a negative relationship between verbal divergent thinking and most subject grades, but a positive one between graphical divergent thinking and grades in science subjects. Moreover, both verbal and graphical convergent thinking had a moderate positive effect on the

probability of passing the final secondary exam. Taken together, these studies suggest that there is a clearer relationship between creativity and academic achievement in relation to standardised scholastic aptitude tests rather than GPA, as the latter is associated with conflicting findings, and that it is informative to use a broader measurement of creativity.

Wellbeing

Another vital outcome for the individual is wellbeing. Subjective wellbeing is a term used to describe an individual's evaluation of their life experience. Within the literature (Huppert and So 2013; Keyes 2006; Ryff 2014), a distinction is made between two forms of wellbeing, hedonic and eudaimonic. Hedonic wellbeing comprises a cognitive appraisal of wellbeing or satisfaction with life and positive and negative affect. Eudaimonic wellbeing, on the other hand, is concerned with fulfilment of one's potential and positive psychological functioning, and is also referred to as psychological wellbeing (Diener 1984; Huppert and So 2013; Lindert et al. 2015). Just as is the case with creativity, there are many different ways in which to measure wellbeing. N. Park et al. (2004) found only a weak positive association between creativity and life satisfaction, when measuring creativity as a personality character-strength whereas H. Park et al. (2015) found a stronger positive association between a creative personality profile and higher levels of life satisfaction. Tamannaefar and Motaghedifard (2014) measured divergent creative thinking and three components of subjective wellbeing – emotional (reflecting positive feelings about life), social (reflecting satisfaction with social relationships), and psychological. They found that creativity predicted subjective wellbeing overall, and that there was a positive relationship between creativity and the subscales of social and psychological wellbeing, but a negative relationship with emotional wellbeing. Gostoli et al. (2017) examined the relationship between creative personality traits and psychological wellbeing and found that creativity was a significant predictor of the personal growth factor in psychological wellbeing. So the evidence suggests a positive relationship between creativity and wellbeing that is limited to particular aspects of wellbeing.

Forgeard and Elstein (2014) suggested that creativity contributes to wellbeing through enhancing psychological flexibility, helping to solve problems, and achieving personal potential. Rasulzada (2014) construed creative ability as a coping mechanism that allows people to tackle and adapt to constantly changing work environments, reducing stress and thereby contributing to wellbeing. Little is known about the mechanisms that underlie the relationship between creativity and wellbeing or indeed about the nature of this relationship in children and young people of school age.

Outcomes of Creative Practice

Many people choose to engage in creative activities purely for their own pleasure. However, there is a considerable body of literature that describes the benefits of creative pursuits beyond personal enjoyment. Moran (2010) identified two roles for creativity in society, improvement and expression. The improvement role is viewed from the perspective of groups within society which evaluate creative output for its contribution to progress in problem-solving and innovation. The expression role is viewed from the perspective of the individual, with a goal of finding meaning, personal development and individuality, and is related to the aforementioned mini-c and little-c levels of creativity. The second of these roles offers a potentially useful perspective from which to consider the outcomes of engaging in creative activity.

Participation in creative activities is typically associated with the arts and it often extends also to wellbeing. In the UK, the All Party Parliamentary Group on Arts Health and Wellbeing's (APPGAHW) report, "Creative Health: The Arts for Health and Wellbeing" (2017) has provided a comprehensive review of research into the benefits that the arts can bring to health and wellbeing. The report cites studies where the arts have been used to reduce acute pain in children, improve rehabilitation from brain injury such as stroke, help to regulate chronic conditions, reduce stress anxiety and depression in parents and children, and improve physical and mental function in people with Parkinson's, respiratory conditions, cystic fibrosis, heart disease and cancer. In older people, it can

increase function in dementia patients and quality of life in them and their carers. As well as improving outcomes for people with physical and mental health conditions, the report also argues for the importance of the arts for general wellbeing, particularly in deprived communities, and cites a number of programmes which have achieved positive results in improving wellbeing.

In the context of education, it is useful to consider particularly the benefits of arts programmes for children and young people. The APPGAHW (2017) report highlights studies which have been shown to improve learning and development, readiness for school and help older young people in the transition to adulthood. Programmes have demonstrated improved outcomes in engagement with learning, life skills, emotional wellbeing and healthy behaviours, and reduced emotional and behavioural problems in children and young people who were struggling to engage with learning.

Although creative practice has been widely used to support wellbeing, the potential mechanisms underlying the same are unclear. Evans (2007) suggested that creative activities improve wellbeing by building abilities which increase feelings of self-efficacy. Leckey (2011) suggested that participation in arts therapy increases wellbeing by building social networks and improving self-esteem. Bujacz et al. (2016) found that engagement in creative tasks improved positive mood, when compared to non-creative tasks, although only by a small degree. The effect was mediated by feelings of autonomy, and absorption in the task. Participants in the creative task had higher autonomy through more choice and opportunity for self-expression, and this led to a higher level of positive emotions. This suggests that creative activities support the need for autonomy and self-expression, which in turn increases positive emotions. More research into the mechanisms by which arts programmes achieve their results can help improve understanding and promote the development of more targeted programmes.

In addition to improving health and wellbeing, research suggests that the arts can lead to improvements in learning and development. Burnard and Dragovic (2015) found that group learning of creative instrumental music has the potential to enhance the wellbeing of schoolchildren through empowerment and engagement. A thorough review of the

empirical evidence for the impact of music on the development of children and young people suggests that engagement with music has a positive impact on language development, literacy, numeracy, measures of intelligence and academic achievement, and on personal and social development including confidence and self-esteem, social skills, teamwork, and self-discipline (Hallam 2010).

Mariale Hardiman has studied the effects of an arts-integrated curriculum on learning outcomes in schools. Rinne et al. (2011) describe two arguments that have been used to justify arts integration in education; firstly, that it enables the transfer of knowledge and skills to non-arts domains, citing evidence that arts students outperform others on measures of academic achievement, and that artistic practice improves certain cognitive abilities; and secondly, that participation in the arts leads to improvements in disposition that lead to success. The authors suggested however that arts integration may operate in a third way, by improving retention of content in long-term memory, through a range of effects such as elaborative rehearsal (which can increase motivation), semantic elaboration, generation, oral production, effort after meaning, emotional arousal, pictorial representation and enactment. Indeed, arts-integrated teaching showed significantly higher retention in a retest 8 weeks later when compared to a standard teaching approach, and the biggest gains were seen in students who showed the lowest level of reading proficiency before the start of the study (Hardiman et al. 2014). This suggests that an arts-integrated curriculum may particularly benefit students with poorer reading ability. In summary, there is empirical support for the idea that creative practice has physical and mental health benefits, can improve outcomes for children and young people in education, and enhance learning and development.

Conclusion

This chapter has discussed the complex interplay of factors such as intelligence, personality, executive functions, motivation and the environment, as well as the domain of expression (such as arts and sciences) and the way in which creativity is measured. The development and expression

of creativity in children and young people is affected by factors in the environment such as socioeconomic status, the classroom environment and culture, and the development of creative cognition itself may be influenced by the developmental trajectory of different cognitive processes which contribute to creative potential (see, e.g. Barbot et al. 2016; Torrance 1968). Several models, such as the aforementioned Sternberg and Lubart's investment theory, have recognised this complexity. For example, in Csikszentmihalyi's (1988) systems model, creativity occurs at the intersection of the individual, the domain, and the field, which provides the social validation of the creative contribution. Amabile's (1996) componential theory of creativity sees creativity as the confluence of domain-relevant knowledge and skills, and creativity-relevant skills and task motivation, which is affected by the social environment. Barbot et al. (2016) have proposed a complex optimal-fit theory of creativity with an interaction between personality, motivation, environment and domain.

In the UK, the National Advisory Council on Creative and Cultural Education (1999) argued that creative education has the ability to unlock everyone's creative potential, and that this would benefit not just the students' self-esteem and achievement, but also, more broadly, economic prosperity and social cohesion. The research discussed in this paper has shown how an education policy that recognises the value of and encourages creativity can help to improve outcomes such as academic achievement and wellbeing, and to deliver the benefits of creative practice for the individual and for society. It would therefore be useful to further explore the dynamics that underlie the interplay of the factors which predict creative potential and creative achievement, the positive outcomes associated with creativity and creative practice, and the mechanisms by which those outcomes are achieved.

References

- Abraham, A. (2014a). Is There an Inverted-U Relationship Between Creativity and Psychopathology? *Frontiers in Psychology*, 5(750). <https://doi.org/10.3389/fpsyg.2014.00750>.
- Abraham, A. (2014b). Neurocognitive Mechanisms Underlying Creative Thinking: Indications from Studies of Mental illness. In J. C. Kaufmann

- (Ed.), *Creativity and Mental Illness* (pp. 79–101). Cambridge: Cambridge University Press.
- Abraham, A. (2018). The Forest Versus the Trees: Creativity, Cognition and Imagination. In R. E. Jung & O. Vartanian (Eds.), *Cambridge Handbook of the Neuroscience of Creativity*. Cambridge: Cambridge University Press.
- Abraham, A., & Windmann, S. (2007). Creative Cognition: The Diverse Operations and the Prospect of Applying a Cognitive Neuroscience Perspective. *Methods*, 42(1), 38–48. <https://doi.org/10.1016/j.ymeth.2006.12.007>.
- All-Party Parliamentary Group on Arts Health and Wellbeing. (2017). *Creative Health: The Arts for Health and Wellbeing* (2nd ed.). London. Retrieved from <http://www.artshealthandwellbeing.org.uk/appg-inquiry/>
- Amabile, T. M. (1979). Effects of External Evaluation on Artistic Creativity. *Journal of Personality and Social Psychology*, 37(2), 221–233. <https://doi.org/10.1037/0022-3514.37.2.221>.
- Amabile, T. M. (1982). Social Psychology of Creativity: A Consensual Assessment Technique. *Journal of Personality and Social Psychology*, 43(5), 997–1013. <https://doi.org/10.1037//0022-3514.43.5.997>.
- Amabile, T. M. (1996). *Creativity in Context*. Boulder: Westview.
- Ariely, D., Gneezy, U., Loewenstein, G., & Mazar, N. (2009). Large Stakes and Big Mistakes. *The Review of Economic Studies*, 76(2), 451–469.
- Baer, J. (1998). Gender Differences in the Effects of Extrinsic Motivation on Creativity. *Journal of Creative Behavior*, 32(1), 18–37.
- Barbot, B., Lubart, T. I., & Besançon, M. (2016). “Peaks, Slumps, and Bumps”: Individual Differences in the Development of Creativity in Children and Adolescents. *New Directions for Child & Adolescent Development*, 2016(151), 33–45. <https://doi.org/10.1002/cad.20152>.
- Barron, F. (1961). Creative Vision and Expression in Writing and Painting. In D. W. MacKinnon (Ed.), *The Creative Person* (pp. 237–251). Berkeley: Institute of Personality Assessment Research, University of California.
- Batey, M., & Furnham, A. (2006). Creativity, Intelligence, and Personality: A Critical Review of the Scattered Literature. *Genetic, Social, and General Psychology Monographs*, 132(4), 355–429.
- Benedek, M., Franz, F., Heene, M., & Neubauer, A. C. (2012). Differential Effects of Cognitive Inhibition and Intelligence on Creativity. *Personality and Individual Differences*, 53, 480–485. <https://doi.org/10.1016/j.paid.2012.04.014>.

- Berlin, N., Tavani, J.-L., & Besançon, M. (2016). An Exploratory Study of Creativity, Personality and Schooling Achievement. *Education Economics*, 24(5), 536–556.
- Bujacz, A., Dunne, S., Fink, D., Gatej, A. R., Karlsson, E., Ruberti, V., & Wronska, M. K. (2016). Why Do We Enjoy Creative Tasks? Results from a Multigroup Randomized Controlled Study. *Thinking Skills and Creativity*, 19, 188–197. <https://doi.org/10.1016/j.tsc.2015.11.002>.
- Burnard, P., & Dragovic, T. (2015). Collaborative Creativity in Instrumental Group Music Learning as a Site for Enhancing Pupil Wellbeing. *Cambridge Journal of Education*, 45(3), 371–392. <https://doi.org/10.1080/0305764X.2014.934204>.
- Carson, S. H., Peterson, J. B., & Higgins, D. M. (2003). Decreased Latent Inhibition Is Associated with Increased Creative Achievement in High-Functioning Individuals. *Journal of Personality and Social Psychology*, 85(3), 499–506.
- Carson, S. H., Peterson, J. B., & Higgins, D. M. (2005). Reliability, Validity, and Factor Structure of the Creative Achievement Questionnaire. *Creativity Research Journal*, 17(1), 37–50. https://doi.org/10.1207/s15326934crj1701_4.
- Costa, J. P. T., & McCrae, R. R. (1992). Four Ways Five Factors Are Basic. *Personality and Individual Differences*, 13, 653–665. [https://doi.org/10.1016/0191-8869\(92\)90236-I](https://doi.org/10.1016/0191-8869(92)90236-I).
- Cropley, A. (2006). In Praise of Convergent Thinking. *Creativity Research Journal*, 18(3), 391–404. https://doi.org/10.1207/s15326934crj1803_13.
- Csikszentmihalyi, M. (1988). Society, Culture, Person: A Systems View of Creativity. In R. J. Sternberg (Ed.), *The Nature of Creativity* (pp. 325–339). Cambridge: Cambridge University Press.
- da Costa, S., Páez, D., Sánchez, F., Garaigordobil, M., & Gondim, S. (2015). Personal Factors of Creativity: A Second Order Meta-Analysis. *Journal of Work and Organizational Psychology*, 31(3), 165–173. <https://doi.org/10.1016/j.rpto.2015.06.002>.
- Dai, D. Y., Tan, X., Marathe, D., Valtcheva, A., Pruzek, R. M., & Shen, J. (2012). Influences of Social and Educational Environments on Creativity During Adolescence: Does SES Matter? *Creativity Research Journal*, 24(2–3), 191–199.
- De Dreu, C. K. W., Nijstad, B. A., Baas, M., Wolsink, I., & Roskes, M. (2012). Working Memory Benefits Creative Insight, Musical Improvisation, and Original Ideation Through Maintained Task-Focused Attention. *Personality*

- ✂ *Social Psychology Bulletin*, 38(5), 656–669. <https://doi.org/10.1177/0146167211435795>.
- Deng, L., Wang, L., & Zhao, Y. (2016). How Creativity Was Affected by Environmental Factors and Individual Characteristics: A Cross-Cultural Comparison Perspective. *Creativity Research Journal*, 28(3), 357–366. <https://doi.org/10.1080/10400419.2016.1195615>.
- Diamond, A. (2013). Executive Functions. *Annual Review of Psychology*, 64(1), 135–168 134p. <https://doi.org/10.1146/annurev-psych-113011-143750>.
- Diener, E. (1984). Subjective Well-Being. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>.
- Evans, J. E. (2007). The Science of Creativity and Health. In I. A. Serlin, J. Sonke-Henderson, R. Brandman, J. Graham-Pole, I. A. Serlin, J. Sonke-Henderson, R. Brandman, & J. Graham-Pole (Eds.), *Whole Person Healthcare Vol 3: The Arts and Health* (pp. 87–105). Westport: Praeger Publishers.
- Feist, G. J. (1998). A Meta-Analysis of Personality in Scientific and Artistic Creativity. *Personality & Social Psychology Review*, 2(4), 290–309.
- Feist, G. J. (2010). The Function of Personality in Creativity: The Nature and Nurture of the Creative Personality. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge Handbook of Creativity* (pp. 113–130). Cambridge: Cambridge University Press.
- Forgeard, M. J. C., & Elstein, J. G. (2014). Advancing the Clinical Science of Creativity. *Frontiers in Psychology*, 5, 613. <https://doi.org/10.3389/fpsyg.2014.00613>.
- Gajda, A., Karwowski, M., & Beghetto, R. A. (2017). Creativity and Academic Achievement: A Meta-Analysis. *Journal of Educational Psychology*, 109(2), 269–299. <https://doi.org/10.1037/edu0000133>.
- Gostoli, S., Cerini, V., Piolanti, A., & Rafanelli, C. (2017). Creativity, Bipolar Disorder Vulnerability and Psychological Well-Being: A Preliminary Study. *Creativity Research Journal*, 29(1), 63–70. <https://doi.org/10.1080/10400419.2017.1263511>.
- Guilford, J. P. (1967). *The Nature of Human Intelligence*. London: McGraw-Hill.
- Hallam, S. (2010). The Power of Music: Its Impact on the Intellectual, Social and Personal Development of Children and Young People. *International Journal of Music Education*, 28(3), 269–289.
- Hardiman, M., Rinne, L., & Yarmolinskaya, J. (2014). The Effects of Arts Integration on Long-Term Retention of Academic Content. *Mind, Brain, and Education*, 8(3), 144–148.

- Hennessey, B. A. (2015). Creative Behavior, Motivation, Environment and Culture: The Building of a Systems Model. *Journal of Creative Behavior*, 49(3), 194–210.
- Hennessey, B. A., & Amabile, T. M. (1988). Story-Telling: A Method for Assessing Children's Creativity. *Journal of Creative Behavior*, 22, 212–227.
- Hong, E., Peng, Y., & O'Neil, H. F., Jr. (2014). Activities and Accomplishments in Various Domains: Relationships with Creative Personality and Creative Motivation in Adolescence. *Roeper Review*, 36(2), 92–103.
- Huppert, F. A., & So, T. T. C. (2013). Flourishing Across Europe: Application of a New Conceptual Framework for Defining Well-Being. *Social Indicators Research*, 110(3), 837–861.
- Jauk, E., Benedek, M., Dunst, B., & Neubauer, A. C. (2013). The Relationship Between Intelligence and Creativity: New Support for the Threshold Hypothesis by Means of Empirical Breakpoint Detection. *Intelligence*, 41, 212–221. <https://doi.org/10.1016/j.intell.2013.03.003>.
- Kandler, C., Riemann, R., Angleitner, A., Spinath, F. M., Borkenau, P., & Penke, L. (2016). The Nature of Creativity: The Roles of Genetic Factors, Personality Traits, Cognitive Abilities, and Environmental Sources. *Journal of Personality and Social Psychology*, 111(2), 230–249.
- Karwowski, M., Kaufman, J. C., Lebuda, I., Szumski, G., & Firkowska-Mankiewicz, A. (2017). Intelligence in Childhood and Creative Achievements in Middle-Age: The Necessary Condition Approach. *Intelligence*, 64, 36–44. <https://doi.org/10.1016/j.intell.2017.07.001>.
- Kaufman, J. C. (2009). *Creativity 101*. New York: Springer.
- Kaufman, J. C., & Beghetto, R. A. (2009). Beyond Big and Little: The Four C Model of Creativity. *Review of General Psychology*, 13(1), 1–12. <https://doi.org/10.1037/a0013688>.
- Kaufman, S. B., Quilty, L. C., Grazioplene, R. G., Hirsh, J. B., Gray, J. R., Peterson, J. B., & Deyoung, C. G. (2016). Openness to Experience and Intellect Differentially Predict Creative Achievement in the Arts and Sciences. *Journal of Personality*, 84(2), 248–258. <https://doi.org/10.1111/jopy.12156>.
- Keyes, C. L. M. (2006). Subjective Well-Being in Mental Health and Human Development Research Worldwide: An Introduction. *Social Indicators Research*, 77(1), 1–10.
- Kim, K. H. (2005). Can Only Intelligent People Be Creative? A Meta-Analysis. *Journal of Secondary Gifted Education*, 16(2–3), 57–66.
- Kirsch, C., Lubart, T., & Houssemand, C. (2016). Comparing Creative Profiles: Architects, Social Scientists and the General Population. *Personality and*

- Individual Differences*, 94, 284–289. <https://doi.org/10.1016/j.paid.2016.01.035>.
- Kozbelt, A., Beghetto, R. A., & Runco, M. A. (2010). Theories of Creativity. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge Handbook of Creativity* (pp. 20–47). Cambridge: Cambridge University Press.
- Leckey, J. (2011). The Therapeutic Effectiveness of Creative Activities on Mental Well-Being: A Systematic Review of the Literature. *Journal of Psychiatric and Mental Health Nursing*, 18(6), 501–509. <https://doi.org/10.1111/j.1365-2850.2011.01693.x>.
- Lindert, J., Bain, P. A., Kubzansky, L. D., & Stein, C. (2015). Well-Being Measurement and the WHO Health Policy Health 2010: Systematic Review of Measurement Scales. *European Journal of Public Health*, 25(4), 731–740. <https://doi.org/10.1093/eurpub/cku193>.
- Martindale, C. (1999). Biological Bases of Creativity. In R. J. Sternberg (Ed.), *Handbook of Creativity* (pp. 137–152). Cambridge: Cambridge University Press.
- McGrew, K. S. (2009). CHC Theory and the Human Cognitive Abilities Project: Standing on the Shoulders of the Giants of Psychometric Intelligence Research. *Intelligence*, 37(1), 1–10.
- Mednick, S. (1962). The Associative Basis of the Creative Process. *Psychological Review*, 69(3), 220–232. <https://doi.org/10.1037/h0048850>.
- Moran, S. (2010). The Roles of Creativity in Society. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge Handbook of Creativity* (pp. 74–90). Cambridge: Cambridge University Press.
- National Advisory Committee on Creative and Cultural Education. (1999). *All Our Futures: Creativity, Culture and Education*. London: DfEE.
- Nijstad, B. A., De Dreu, C. K. W., Rietzschel, E. F., & Baas, M. (2010). The Dual Pathway to Creativity Model: Creative Ideation as a Function of Flexibility and Persistence. *European Review of Social Psychology*, 21(1), 34–77. <https://doi.org/10.1080/10463281003765323>.
- Nusbaum, E. C., & Silvia, P. J. (2011). Are Intelligence and Creativity Really So Different? Fluid Intelligence, Executive Processes, and Strategy Use in Divergent Thinking. *Intelligence*, 39(1), 36–45. <https://doi.org/10.1016/j.intell.2010.11.002>.
- Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of Character and Well-Being. *Journal of Social and Clinical Psychology*, 23(5), 603–619. <https://doi.org/10.1521/jscp.23.5.603.50748>.

- Park, H., Suh, B. S., Kim, W. S., Lee, H.-K., Park, S.-C., & Lee, K. (2015). Character Profiles and Life Satisfaction. *Comprehensive Psychiatry*, *58*, 172–177. <https://doi.org/10.1016/j.comppsy.2014.12.013>.
- Radel, R., Davranche, K., Fournier, M., & Dietrich, A. (2015). The Role of (Dis)Inhibition in Creativity: Decreased Inhibition Improves Idea Generation. *Cognition*, *134*, 110–120. <https://doi.org/10.1016/j.cognition.2014.09.001>.
- Rasulzada, F. (2014). Creativity at Work and Its Relation to Well-Being. In E. Shiu & E. Shiu (Eds.), *Creativity Research: An Inter-Disciplinary and Multi-Disciplinary Research Handbook* (pp. 171–190). New York: Routledge/Taylor & Francis Group.
- Rhodes, M. (1961). An Analysis of Creativity. *Phi Delta Kappan*, *42*, 305–310.
- Rinne, L., Gregory, E., Yarmolinskaya, J., & Hardiman, M. (2011). Why Arts Integration Improves Long-Term Retention of Content. *Mind, Brain, and Education*, *5*(2), 89–96.
- Runco, M. A. (2004). Creativity. *Annual Review of Psychology*, *55*, 657–687.
- Runco, M. A., & Jaeger, G. J. (2012). The Standard Definition of Creativity. *Creativity Research Journal*, *24*(1), 92–96. <https://doi.org/10.1080/10400419.2012.650092>.
- Ryff, C. D. (2014). Psychological Well-Being Revisited: Advances in the Science and Practice of Eudaimonia. *Psychotherapy and Psychosomatics*, *83*(1), 10–28.
- Sternberg, R. J., & Lubart, T. I. (1992). Buy Low and Sell High: An Investment Approach to Creativity. *Current Directions in Psychological Science*, *1*(1), 1–5. <https://doi.org/10.1111/1467-8721.ep10767737>.
- Tamannaefar, M. R., & Motaghedifard, M. (2014). Subjective Well-Being and Its Sub-Scales Among Students: The Study of Role of Creativity and Self-Efficacy. *Thinking Skills and Creativity*, *12*, 37–42. <https://doi.org/10.1016/j.tsc.2013.12.003>.
- Torrance, E. P. (1968). A Longitudinal Examination of the Fourth Grade Slump in Creativity. *Gifted Child Quarterly*, *12*(4), 195–199.



11

Assessing Creativity: Four Critical Issues

Rachael Jacobs

What Are Creative Assessment Tasks?

Creative assessment tasks provide learners with unique learning experiences. Creative pursuits can be assessed formatively and summatively through a range of assessable instruments. This chapter engages in a review of literature around four critical issues relating to creative assessment tasks. As a researcher situated in Australia, the findings of this chapter are situated within a western schooling framework, in which the curriculum is divided along subjects and developmental stages. As I conduct research in Dance, Drama and Music education, a lot of my findings are drawn from the world of the Arts, describing assessment tasks used in schooling to demonstrate artistry. However, I hope the provocations contained in this chapter can be applied to other areas of the curriculum. Firstly, this chapter outlines the many challenges associated with creative tasks. The critical components of creative assessment tasks, as identified

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in literature, will be discussed, followed by an exploration of accompanying criteria used to make judgements on the quality of learners' work. Finally, nature of quantifiable judgements in the creative learning environment will be discussed. This chapter cites several examples of creative assessment tasks used in schooling, including drama performances, music compositions, choreographic tasks, design work and creative writing. These are not definitive examples of creative tasks, but they illustrate the ways in which creativity can be harnessed while producing quantifiable outcomes.

There are many definitions and interpretations of what constitutes a creative assessment task. Csikszentmihalyi (1988) suggests that the most fundamental question in creativity is 'where is creativity', not 'what is creativity'. This chapter argues that a creative assessment task includes a creative component that is formatively or summatively assessed; Learners need to apply original thinking in their response to the task or create "meaningful, new forms" (Gibson 2010, p. 608). This is certainly the case in arts education; Learners choreograph movement sequences, compose or interpret music pieces, create visual art works, devise or interpret drama performances. Creative assessment tasks should accommodate a degree of risk-taking, independence and flexibility. Gibson mentions these as environmental factors that support creativity. Creative assessment tasks are dynamic in that they allow for a range of responses from learners. In the Arts this dynamism involves artistry, in which the learner must apply an aesthetic lens to their ideas and consider its suitability for audiences.

As with any programmed learning experience, a creative assessment task must conform to myriad of syllabus and curriculum requirements, including those related to assessment and certification. Assessment is often popularly characterised as the enemy, the stifler or even the killer of creativity (Beghetto 2005). However, this chapter argues that creative assessment tasks can be a facilitator and promoter of creative growth. Furthermore, creative assessment tasks help link the learning environment to facets of life in the broader world. The human experience involves choice, interpretation, observation and ambiguity, and these concepts should be present in the learning environment. But simply providing creative learning experiences is not enough. This chapter contends that

for creative learning to be truly meaningful, assessment, both formative and summative, must take place so that learners might continue to enhance their creative development. Ongoing and regular assessment is a critical component of the creative classroom. Furthermore, the formal assessment of creative tasks, whereby feedback is given and data recorded, is achievable and necessary to establish the credibility of these tasks and to provide systems for identifying creative achievement within the formal school curricula at all year levels.

The next section uses the following headings to elaborate on the four critical issues associated with creative assessment tasks:

- Challenges of creative tasks
- Critical components of creative tasks
- Criteria appropriate for creative tasks
- Nature of judgements in creative learning environments.

Challenges of Creative Assessment Tasks

There are numerous reasons why creative assessment tasks are challenging. To begin, creative thinking was once somewhat at odds with the traditional structure of schooling. Rational and functional thought processes with quantifiable and definitive answers are more commonly privileged in western education systems, and creative processes were often absent in discussions of learning and curriculum. Martin-Smith (2005) argues that this tension originated from Descartes' philosophy that dissociated the mind from body and considered aesthetic feelings to be associated with irrational senses of the body rather than reasoned thought. As a result, Martin-Smith contends that theories of education are focused on the primacy of cognition, believing that learning is independent of its context. Stemming from these traditions, creative work can strike some as academically 'soft' or less rigorous than other modes of learning. Sadly, creative processes carry common perceptions of highly ethereal qualities that are abstract in nature or often associated with high culture (Ross et al. 1993). Assessment of individuals in creative domains often utilises personal responses to stimuli, which can be disconcerting to those more

accustomed to ‘traditional’ (Hyde 2013, p. 190) assessment methods. Hyde states that traditional assessment methods (such as multiple choice tests, short or long essay questions) are trusted for ensuring reliability and fairness, but can receive criticism for their reductive tendency to ask learners to show evidence of pre-determined knowledge (Ross 1991). Traditional assessment methods ask learners to select responses from their experience in order to fit the function of the question that they are asked. This style of assessment continues to exist and has its own purposes today. For example, in Australia NAPLAN (National Assessment Program Literacy and Numeracy) testing is used to assess individual learners’ literacy and numeracy skills, benchmarked against national standards. There is a multiple choice component as part of these exams. Automated assessment, termed ‘robo-marking’ in the media, was to be trialled for the entire exams, even writing components, until community pressure forced the administering body to place the trial on hold.

The challenges of creative assessment tasks are further problematised if creativity is considered assessable. It can be argued that the formal and widespread assessment of student creations can result in a stifling of individual expression, imagination, creativity and originality, while not allowing for the fresh pursuit of ideas (Hanley 2003). Quantifying achievement can be seen to be difficult because of the wide range of creative responses that may be given to a particular task. Some argue that the promotion of innovation, experimental ideas and autonomy creates incomparable measures of success. In performative fields for example, assessments can be complex because of the variations between performance sites, the requirement for ensemble or group work, the nature of the ensemble or group, the access to technical equipment and the composition and reactions of any audience that might be in attendance (Oreck et al. 2003).

For these reasons, creative assessment tasks present challenges for educational administrators. Using an international example, under the 2001 United States policy of ‘No Child Left Behind’ (cited in Zucker 2004), achievement could only be demonstrated by “scientifically rigorous evidence” (p. 2). The term ‘scientifically rigorous’ is a style of measurement that is easily subjected to testing but unsuitable for creative work. While this policy has now been superseded, it is worthy of mention, particularly as Australian policy writers remain wedded to high-stakes testing, via

NAPLAN, and comparative analysis of schools. Internationally, there have been significant movements to embed creativity in schooling systems around. De Bruin and Harris (2017) cite examples such as strategic objectives for creative learning (2015 to 2020) from Wales, or the Free Semester Program (FSP) from South Korea, which allows an interactive curriculum and increased extracurricular programming. Lucas et al. (2012) declare that EU interest in assessing creativity has been particularly strong, particularly since 2009 which was designated ‘European Year of Creativity and Innovation’. Despite these international movements, De Bruin and Harris maintain there has still been no regionally-focused research on Australasian creativity education.

One of the most important challenges is for the teachers who are often the designers of creative assessment tasks. Harris, J. (2008) argues that ‘creativity’ is not easily defined and therefore difficult to assess. It can be difficult to tell where creativity is evident in the assessable product or process. Here we must further ponder the conundrum of assessment *for* or *of* learning. Assessment that rigorously tests learners’ mastery of technical skills needs to be different from assessment that helps learners to be creative (Roberts 2011). This is also a question of what is being assessed; the creative process or the creative outcome. Should judgements be made on the final product or should we simply be satisfied that the learners have engaged creatively to varying degrees? Arts syllabus documents in Australia, such as the NSW Creative Arts syllabus (Board of Studies 2006) tries to make a distinct separation here, defining ‘creating’ outcomes, which can be used for tasks that involve artistic creation, such as choreography or composition; and ‘presenting’ outcomes, that focus on the public mastery of artistic presentation or display. The two certainly intersect for some tasks, but achievements are judged using separate criteria. It is important that the two elements contribute to the creative product or analysis.

Finally, while creativity may be realised in the process that leads to assessment, the assessable product will have been constructed for the purposes of assessment. This is where a conundrum lies. Task designers should consider if their tasks aims to produce creative artefacts or assessable pieces of work, and further enquire as to whether there’s an intersection between the two. It would be fair to say that most learners do not

engage in creative tasks purely for the purposes of assessment. Learners are generally able to perceive the broader aims of creative assessment and they can see the relationship to their 'life skills', as attested to in studies from Hatton (2004) and Smigiel and Barrett (2005). Their research only reports a few studies on learners' perceptions of creative work, but these studies attest to learners being able to acutely perceive the macro level of their learning, the bigger picture of the purpose of creativity in education.

Critical Components of Creative Tasks

The aforementioned challenges lead to a consideration of what makes a task *creative*. Simply engaging in artistic or imaginative work may not always involve creativity, and many classroom teachers often struggle to inject creative processes into learning areas where valuing original ideas isn't immediately apparent. A very wide range of assessment tasks employ creative processes, but when designing tasks that promote creativity in individuals within mainstream schooling, there are some features in the Arts that are effective at facilitating creative engagement.

Creative tasks often involve the demonstration of skills and craftsmanship (Hanley 2003), requiring learners to create original work that will "energise us with some previously unseen thing" (Kleiman 2005, p. 1). Learners are required to synthesise their understanding with original thoughts and formulate a product that can successfully respond to the task requirements. The requirements usually focus on a set of skills that can be learned, developed and assessed. Work produced with creative qualities must be grounded with content knowledge of what is being produced. However, Sawyer (2008) argues that the tasks must not require learners to replicate pre-existing texts. Rather, the student applies the content knowledge together with creative skills to address the task (Pritchard 2004). Divergent responses are permissible and in some cases, encouraged.

Using the example of performances, Cockett (1998) explains that creative tasks are highly dependent on a wide range of interrelated contributions and interlocking variables (Thomas and Millard 2006). Self-devised

group or individual performances, such as those used in dance, drama or music, involve multi-faceted creative processes which emphasise originality and innovation. In order to create original performances, learners are required to interpret theatrical, movement or music traditions, as well as synthesising their own ideas with those conventions, while showcasing their performance skill, and engaging their aesthetic senses, as appropriate to the task. Performers make decisions in the moment as they engage simultaneously in performance and reflection (Baptiste 2008). In the field of creative writing, Donnelley (2015) asserts that assessment is most effective when it is located in practice, and suggests less tangible and more indirect assessment strategies that protect the integrity of creative work and allow learners room for risk, growth and even failure. Assessing effort, participation, context, originality and imagination are methods she discusses that form part of the pedagogical paradigm in which the creative writing takes place. Vandermeulen (2011) suggests that assessment regimes for creative writing should take into account that different audiences will have multiple perspectives on the work.

Creative tasks offer opportunities to achieve and excel, but do not aim for every learner to experience immediate success. Creative tasks are deliberately multifaceted and challenging. Recognising that the assessment of original works presents challenges, Treffinger (2009) argues that educators should abandon attempts to make the assessment of creative products “easy” (p. 246). This is a challenge in itself. McWilliam (2009) asserts that many learners in Western countries are currently being “rescued from rigour” (p. 286), with learning and tasks simplified to guard their learners’ self-esteem. As the world does not entirely consist of definitive answers, McWilliam argues that education should embrace the “grey of knowing” (p. 286) which can be both uncomfortable and disconcerting, particularly to children and adolescents who have been sold an existence of immediate answers in a technologically saturated world. In response to this challenge it is preferable to maintain the complexities of creative assessment tasks as assessment helps to heighten awareness of the challenges of assessing creative work, thereby bringing about greater transparency (Hyde 2013).

Criteria Appropriate for Creative Tasks

Despite all of the challenges mentioned, there is much literature that argues the benefits of creative assessment tasks and attests to creative work as being able to be assessed with a high degree of integrity (Jacobs 2016; Lucas et al. 2012; Colwell 2003; de la Harpe et al. 2009; Fleming 2012; Pistone 2002). In order to make informed judgements about creative work, it has long been argued that transparent criteria are as important as it is for any task (Ross et al. 1993; Griffin and Nix 1991). Well-designed assessment criteria can help to inform learners of the expectations before them (Baptiste 2008; Stemler 2004). As with any task the criteria must be explicitly stated; the attributes for each performance criterion must be explicitly stated; and the attributes are consistently addressed from one level to the next on the progressive scale (Tierney and Marielle 2004). However, the list of rewarded attributes may vary from other tasks. Attributes such as flair, imagination and originality, as appropriate to the content, feature strongly in assessment criteria used to judge the quality of creative work. Assessment is frequently critiqued for stigmatising failure (Robinson 2011) or dissuading learners from taking risks. Therefore, assessment designers must recognise that learners' creative work may not ultimately be successful, but if flair, imagination and originality have been demonstrated in the creative process, they may still be rewarded on the criteria. The assessment of original work additionally requires learners to demonstrate – and assessors to evaluate – not only what learners know, but also what they can produce (Bergen 1993). The criteria must move beyond simple competency based tasks (Vandermeulan 2011), to a place where innovation is valued, within the confines of the curriculum at hand. The continuum of performance levels should assist learners to engage in a critique of their own skills, while also increasing their knowledge and assessing their personal growth (Arter and McTighe 2001; Goodrich Andrade 2000; Hyde 2013; Lindström 2006).

Criterion-referenced assessment, whereby learners' performance is judged against a fixed set of predetermined criteria and standards, is widely used in Australia at all levels of schooling and in higher education

as well. Normative-referenced assessment is still used in various Australian assessment systems that rank learners' achievements against all others. For example, the New South Wales Higher School Certificate uses external examinations as a compulsory assessment task within the assessment regime for most subjects. Criterion-referenced assessment is used for many creative assessment tasks, such as drama performances, music compositions or creative writing assignments. However, the criteria, by its nature, is predicated on the known. Creativity researchers Amabile (1996) and Sternberg (1988) argue that any products derived from a known formula or pre-determined set of instructions can never be considered creative. Kleiman (2005) similarly argues that a criterion-referenced framework is a "closed system" (p. 21) that perpetuates non-creative outcomes. Furthermore it is essential that assessment tools allow learners the scope to be able to utilise creative modes of learning and discovery rather than push them into over-defined moulds where outcomes are predictable. Creative assessment tasks must be a judgements on the outcome of creative learning, discovery and creativity (Sadler 2009) rather than a confinement of learners into responses that are predictable and iterative (Ross 1994). Sadler further argues that assessment of the task and criteria should enable learners to demonstrate abilities in both design and production within their response in order to foster creativity in the learners' analysis and expression; termed 'divergent works'. Divergent responses are complex and their assessment requires skilled, qualitative judgements using multiple criteria, some of which may be abstract in nature. To further problematise criteria, creative tasks are culturally constructed and can be subjective in the context of their time and place. It can be argued that artistic pioneers, such as artist Pablo Picasso, composer John Cage or dancer/choreographer Isadora Duncan created new artistic movements which would have been unfamiliar or even disconcerting to critics and audiences at the time. If the criteria for success is only based upon what has already been seen and known it creates a closed circuit whereby learners are required to replicate ideas rather than creating new ones of their own.

In field of music, Dixon (2000) and Asmus (1999) further critique the use of assessment criteria, contending that insufficient detail is contained in assessment criteria and the communication of what is valued is

problematic. Ross (1994) and Gordon (2004) assert that assessment criteria are created by teachers who may have a background as practitioners, for example, as musicians. It can be difficult to place this practitioner wisdom in a grid that is meaningful for learners. Gordon also explains the difficulty when dealing with responses that work 'beyond' the brief, containing what he explains as the 'wow' factor. The wow factor is "an elegance, which will arrest and satisfy the reader, in the terms of the medium, beyond the norm demonstrating innovation, ingenuity, independent thought and divergent thinking" (Gordon, p. 62). In the field of drama, Dixon (2000) calls for criteria to recognise stage presence, which can be an intangible mixture of charisma, talent and ego. However, for learning propositions, creative assessment must not be dependent on individual talent or natural ability. The aim of assessment is to record a learners' progress on a learning trajectory. As Sternberg et al. (2002) argue, creativity is not an intrapersonal variable. A person's cognitive process cannot be characterised as more or less creative and we cannot fully judge that person's creativity independent of the context of which they are working. Dixon (2000) qualifies his inclusion of these attributes, adding that passion, soul and spirit are often omitted as criteria within drama assessment, yet these qualities lie at the heart of great performance. The teacher, who is also the assessor, observes that passion, soul and spirit, and identifies skills and qualities that they themselves may not have anticipated. Taylor (2006) asserts that many contemporary creative assessment tasks diminish the importance of creativity and aesthetic dimensions as assessors have been required to be overly concerned with technical skills, due to the 'outcomes' orientation of the education system.

The challenges do not mean that achievements are unable to be quantified in creative learning. On the contrary, the need for assessment procedures that use carefully constructed criteria is heightened to avoid the perceptions that creativity is impossible to assess, containing too many variables or differing scenarios. There are certainly possibilities for working outside the brief, as mentioned previously, but this is not an excuse for assessment processes to be shrouded in mystery. According to Gordon (2004), the "knowing it when they find it" (p. 62) approach to assessment is no longer acceptable in any area of contemporary education. In contrast to the previous critique of criteria for creative tasks, Boulter

(2004) argues that criterion-referenced assessment is a key to our existing understanding of measurement as it is demonstrably fair, enabling learners to prepare for assessments, engage with judgements and appeal against results. To aid transparency, there have been further developments in the language used for assessment criteria. It is now, for example, acceptable to use simpler, less descriptive grids, less formal language or holistic criteria (Sadler 2009) while still communicating expectations using acceptable formal terminologies.

While problematic in some of its features, criteria-based assessment is highly suitable for creative work, however, it takes expertise and experience to design and apply criteria effectively for creative tasks. It should also be recognised that not every judgement or assessor response can be contained in tightly worded criteria. Dixon (2000) argues that rather than doing away with assessment criteria, creative and artistic assessment should recognise the realities of how criteria is applied and concurrently recognise that a myriad of criteria exist “which appear nowhere on the sheet”. Dixon goes on to conclude that “arguably, we are using an inappropriately rational, objective, quasi-scientific model to assess a largely irrational, spontaneous and subjective art”.

Nature of Judgements in Creative Learning Environments

Creative assessment tasks with multiple possible outcomes, often rich in artistry, conjure the notion of subjectivity which can be off-putting in an assessment climate which is generally objectivity-focussed or at the very least, objectivity-seeking. Haynes (1993) and Ross et al. (1993) describe traditional assessment methods as being focused on objectivity, whereby assessors are expected to discard their own feelings in favour of strictly set criteria in which interpretations are not required. This runs contrary to the nature of some aspects of educational provision in Australian assessment/examination systems. O’Toole et al. (2009) remind us, “Knowledge and learning are of course never objective nor value-neutral, much though ultraconservative groups and politicians might wish them to be seen as

such” (p. 108). Academic literature on creative learning contains a myriad of views on subjective and objective judgement. Jackson (2006) argues that, “it should be possible to separate subjective judgements of creativity from judgements of technical goodness and from judgements of aesthetic appeal” (p. 169). However, Tomlinson (2001) argues for a “healthy balance” between subjective and objective types of performance assessment to provide the most “individually sensitive, accurate, and comprehensive evidence” of student learning (p. 15). Misson (1996) adds that embracing aesthetic learning as a site for constructing subjectivity will facilitate a nexus of intelligence and emotion. “Thought is charged with feeling, while feeling is refined and strengthened by thought” (p. 11). Jackson (2006) further justifies the validity of creative assessment tasks, arguing that “it should be possible to separate subjective judgments of creativity from judgments of technical goodness and from judgments of aesthetic appeal” (p. 169). Having said this, it is important not to set up a binary combat between the worlds of the cognitive and the creative, as though they are two distinct modes of cognition that cannot meet. There are intersections of both as a result of creative engagements which creates a space where the duality of objective and subjective constructs come into play.

From the perspective of the assessor my research suggests that they concurrently audience the piece of creative work as they make judgements (Jacobs 2011). For example, assessors make judgements as they experience the choreographic presentation or musical performance, read the creative writing, or examine the design that has been created. But they are more active than other audience members. Writing from the field of Drama, Dunn (2005) argues much of the work is both ephemeral and fragile in nature. Therefore, the ability of the assessor to capture their thoughts on the quality of work as it occurs is vital to the integrity of the assessment process. During a performance, the assessor is required to make judgements about the quality of the work and physically notate their thoughts in relation to given criteria. The assessor makes cognitive links between student choices based on the assessment criteria, balancing their judgements with their own implicit criteria, which are necessarily based on their personal experiences (Baptiste 2008). While an audience member is permitted to make purely subjective judgements, the assessor

aims to make informed judgements, which may result in marks or grades being recorded. Assessors of creative work develop expertise in assessing the outcome of the creative process or the manifestation of the creative experience. The product is therefore viewed from a number of perspectives and informed judgements are made by the assessor based on set criteria and personal discretionary judgements in relation to, and the quality of, what is produced (Ross et al. 1993).

Leach et al. (2000) argue that assessors are consciously and unconsciously biased by their own values, preferences and dispositions. In this respect, personal responses from both the assessor and the student can widen the possibilities for interpretation (Ross et al. 1993). An assessor may be moved as a result of audiencing creative work (Roberts 2011). Rather than command that assessors discard these personal responses, it is preferable for learners to be taught to use individuals' insights to reflect upon, and if necessary, make adjustments to their performances (Soep 2005). School students do not engage in creative work solely for the purpose of being assessed; rather they engage to pursue their own ideas and expressions. Therefore, learners should be encouraged to assess feedback and apply their own creative decisions to their work. Both learners and teacher-assessors should be aware that subjective responses are natural, as they are rooted in "culturally authorised criteria" (Ross et al. 1993, p. 164) for judgement of the level of achievement. However, the assessor's judgement is recorded in quantifiable terms such as grades or marks, therefore, the student has a heightened awareness of the assessor's responses in the high-stakes assessment environment.

Continuing the Conversation: Implications for Policy

As creativity is accessed across the school curriculum, it follows that creative work is regularly assessed in a variety of ways. This paper argues that assessment is not a series of hoops to be jumped through, or a paradigm to be endured for the sake of validation or certification. The tasks should inspire learners to demonstrate original thought, produce a realised vision

and sometimes, show imaginative flair or artistic merit. Students become inventors, creators, artists or curators, as they go beyond what is known and set out to create assessable artefacts that do not yet exist. The possibilities for the student and the wider world are exciting. A wide range of responses are plausible to a particular task, including divergent responses. This chapter discusses challenges experienced by teachers, assessors and administrators, such as the perception of the intangible nature of creativity, some teachers' unfamiliarity with the assessment of personal responses, the wide range of responses permissible to the task and the reductive nature of some assessment criteria. The chapter also attempts to present some approaches to negotiate the challenges through task design. These include the inclusion of learning experiences that help learners be creative, the inclusion of assessment criteria that values the creative process as well as the product, making assessment tasks deliberately challenging as appropriate to learners' experience, and creating criteria that value flair, originality, imagination and allow for a degree of failure. The development of tasks that allow work beyond the brief (Gordon 2004) is also critical.

Similarly, it must be noted that the assessment process is a product of the learning environment and curriculum at hand (Kleiman 2005). Assessment tasks alone cannot lead learners to be creative. Rather, a creative curriculum, learning environment and subsequent assessment processes create the conditions that allow creativity to thrive. When designing assessment tasks, learners must never be objects of assessment. Learning environments must provide learners with creative agency, which narrows the gap between creative learning and assessment.

This chapter has also attempted to engage in a discussion of the nature of judgements for creative tasks, encouraging assessors not to minimise their subjective views, in pursuit of values-neutral judgements which simply cannot exist for creative tasks. Creative tasks challenge traditional learning and assessment paradigms, which is important as it broadens educators' understandings of the nature of learning. However, creative assessment tasks in themselves cannot foster creativity in schooling. For creativity to occur, a learning environment must be embedded with creative philosophies and practices that allows for the pursuit of those "meaningful, new forms" (Gibson 2010, p. 608). Harris, A. (2017) has

theorised creative ecologies as a conceptual model for fostering creativity, specifically in secondary contexts. De Bruin and Harris (2017) go to further to propose an organisational reflection and self-assessment of creativity, using their *Whole School Creativity Audit* which evaluates a school's readiness and commitment towards developing creative environments, cultures, and ecologies. Lucas et al. (2012) have also trialed framework for teachers to assess the development of young people's creativity. In a small but rigorous trial, teachers found their framework to be helpful and plausible, denoting an interest in tools that can assist teachers to teach creativity and to help learners develop their own creativity more effectively.

A future possibility for researchers, teachers and education administrators would be to create a creativity matrix that can be applied to creative assessment tasks to discern what elements of creative thinking are being fostered and assessed. There are possibilities for the principles of organisational reflection and self-assessment outlined in De Bruin and Harris's (2017) approach to be applied to assessment tasks that claim to be creative. In order to address the many critiques of criterion-referenced assessment for creative work, the development of a meta-rubric could prove helpful for assisting teachers in the design of criteria that ensures that creativity is not compromised in the assessment process. Discussing the merits of creative assessment among teachers and school administrators is also important as it allows for the rigour and complexities of the tasks to become visible to those unaccustomed to the processes.

While I have identified my field of research as arts education, Lucas et al. (2012) remind us that a central challenge for the cultivation of creativity in schools is their subject-dominated nature. Creativity spans all subject areas and is not limited to the Arts. We, in arts education, must remember that an 'us and them' approach to creative assessment is detrimental. This chapter uses only a few examples of creative assessment tasks, and many more can be found across the curriculum, for example, in science, engineering, physical education, humanities, technological and applied science and philosophy. Some use different processes and language to those mentioned in this chapter, but that is not to say they aren't creative. Purporting that '*no one understands what we do*' perpetuates the myth that creativity is owned by particular domains and it cannot

be subjected to rigorous evaluation. Assessment heightens the rigour of the creative learning process and helps the creativity become more visible and more easily understood.

References

- Amabile, T. M. (1996). *Creativity in Context*. Boulder: Westview Press.
- Arter, J., & McTighe, J. (2001). *Scoring Rubrics in the Classroom: Using Performance Criteria for Assessing and Improving Student Performance*. Thousand Oaks: Corwin Press.
- Asmus, E. (1999). Music Assessment Concepts. *Music Educators Journal*, 86(2), 31–39.
- Baptiste, L. (2008, April 23–26). Managing Subjectivity in Arts Assessments. In L. Quamina-Aiyejina (Ed.), *Reconceptualising the Agenda in the Caribbean: Proceedings of the 2007 Biennial Cross-Campus Conference in Education*, School of Education, UWI, St. Augustine, Trinidad and Tobago.
- Beghetto, R. A. (2005). Does Assessment Kill Student Creativity? *The Educational Forum*, 69(3), 254–263.
- Bergen, D. (1993). Authentic Performance Assessments. *Childhood Education*, 70(2), 99–102.
- Board of Studies. (2006). *Creative Arts K-6 Syllabus*. Sydney: Board of Studies NSW. Retrieved from: <http://bosnsw-k6.nsw.edu.au/go/creative-arts>
- Boulter, A. (2004). Assessing the Criteria: An Argument for Creative Writing Theory. *International Journal for the Practice and Theory of Creative Writing*, 1(2), 134–140.
- Cockett, S. (1998). Formative Assessment in Drama. *Research in Drama Education*, 3(2), 248–250.
- Colwell, R. (2003). The Status of Arts Assessment: Examples from Music. *Arts Education Policy Review*, 105(2), 19–29.
- Csikszentmihalyi, M. (1988). Society, Culture and Person: A System View of Creativity. In R. J. Sternberg (Ed.), *The Nature of Creativity* (pp. 325–339). New York: Cambridge University Press.
- De Bruin, L., & Harris, A. (2017). Fostering Creative Ecologies in Australasian Secondary Schools. *Australian Journal of Teacher Education*, 42(9), 23–43.
- de la Harpe, B., Peterson, J. F., Frankham, N., Zehner, R., Neale, D., Musgrave, E., et al. (2009). Assessment Focus in Studio: What Is Most Prominent in

- Architecture, Art and Design? *Journal of Art and Design Education*, 28(1), 37–51.
- Dixon, S. (2000, November 8). *Assessing the Performer*. Presentation to the Assessment Workshop, Palatine, University of Lancaster.
- Donnelley, D. (2015). Embracing the Learning Paradigm: How Assessment Drives Creative Writing Pedagogy. In G. Harper (Ed.), *Creative Writing and Education* (pp. 46–56). Great Britain: Multilingual Matters.
- Dunn, J. (2005). Practising the Art of Forensic Assessment. *Drama Queensland Says*, 28(2), 2–5.
- Fleming, M. (2012). *The Arts in Education: An Introduction to Aesthetics, Theory and Pedagogy*. London: Routledge.
- Gibson, R. (2010). The ‘Art’ of Creative Teaching: Implications for Higher Education. *Teaching in Higher Education*, 15(5), 607–613.
- Goodrich Andrade, H. (2000). Using Rubrics to Promote Thinking and Learning. *Educational Leadership*, 57(5), 13–18.
- Gordon, J. (2004). The ‘Wow’ Factor: The Assessment of Practical Media and Creative Arts Subject. *Arts Design and Communication in Higher Education*, 3(1), 61–72.
- Griffin, P., & Nix, P. (1991). *Assessment Methods, Educational Assessment and Reporting*. Sydney: Harcourt Brace Jovanovich.
- Hanley, B. (2003). Policy Issues in Arts Assessment in Canada: “Let’s Get Real”. *Arts Education Policy Review*, 105, 33–37.
- Harris, J. (2008). Developing a Language for Assessing Creativity: A Taxonomy to Support Student Learning and Assessment. *Investigations in University Teaching and Learning*, 5(1). Retrieved April 3, 2018, from http://repository.londonmet.ac.uk/249/1/InvestigationsInUniversityTeachingAndLearning_v5n1_p80-86.pdf
- Harris, A. (2017). *Creative Ecologies: Fostering Creativity in Secondary Schools* (Final Report). Australian Research Council. Available at: <https://www.creativeresearchhub.com/reports>. Retrieved March 23, 2018, from <https://www.creativeresearchhub.com>
- Hatton, C. (2004). On the Edge of Realities: Drama, Learning and Adolescent Girls. *NJ Drama Australia Journal*, 28(1), 87–103.
- Haynes, F. (1993). What Counts as a Competency in the Arts? Paper Presented at the *Australian Association for Research in Education Conference*. Retrieved April 3, 2018, from <https://www.aare.edu.au/data/publications/1993/haynf93103.pdf>

- Hyde, D. P. (2013). What Makes a Good Secondary Assessment? On Achieving the Aims of Assessment. *Journal of Education and Practice*, 4(13), 188–197.
- Jackson, N. (Ed.). (2006). *Developing Creativity in Higher Education: An Imaginative Curriculum*. Oxford: Routledge.
- Jacobs, R. (2011). Performance Footprints Across Australia. *NJ (Drama Journal)*, 33(2), 45–55.
- Jacobs, R. (2016). Challenges of Drama Performance Assessment. *Drama Research*, 7(1), 2–19.
- Kleiman, P. (2005, November). *Beyond the Tingle Factor: Creativity and Assessment in Higher Education*. Paper Presented at the ESRC Creativity Seminar, University of Strathclyde, Scotland.
- Leach, L., Neutze, G., & Zepke, N. (2000). Learners' Perceptions of Assessment: Tensions Between Philosophy and Practice. *Studies in the Education of Adults*, 32(1), 107–119.
- Lindström, L. (2006). Creativity: What Is It? Can You Assess It? Can It Be Taught? *International Journal of Art & Design Education*, 25(1), 53–66.
- Lucas, B., Claxton, G., & Spencer, E. (2012). Progression in Creativity: Developing New Forms of Assessment. Background Paper for the *OECD Conference "Educating for Innovative Societies"*, Centre for Real-World Learning, The University of Winchester, England.
- Martin-Smith, A. (2005). Setting the Stage for Dialogue: Aesthetics in Drama and Theatre Education. *The Journal of Aesthetic Education*, 39(4), 3–11.
- McWilliam, E. (2009). Teaching for Creativity: From Sage to Guide to Meddler. *Asia Pacific Journal of Education*, 29(3), 281–293.
- Misson, R. (1996). Dangerous Lessons: Sexuality Issues in the Drama Classroom. *NADIE Journal*, 20, 11–21.
- O'Toole, J., Stinson, M., & Moore, T. (2009). *Drama and Curriculum: A Giant at the Door*. Fitzroy: Springer.
- Oreck, B., Owen, S., & Baum, S. (2003). Validity, Reliability and Equity Issues in an Observational Talent Assessment Process in the Performing Arts. *Journal for the Education of the Gifted*, 27(1), 62–94.
- Pistone, N. (2002). *Envisioning Arts Assessment: A Process Guide for Assessing Arts Education in School Districts and States*. Washington, DC: Council of Chief State School Officers.
- Pritchard, G. (2004, July 4–7). In the Eye of the Beholder: Assessment of Aesthetics. Paper Presented at the *Transforming Knowledge into Wisdom: Holistic Approaches to Teaching and Learning, HERDSA Conference, Sarawak*.
- Roberts, D. (2011). Grading the Performance of Clinical Skills: Lessons to be Learned from the Performing Arts. *Nurse Education Today*, 31(6), 607–610.

- Robinson, K. (2011). *Out of Our Minds: The Power of Being Creative*. Chichester: Capstone.
- Ross, M. (1991). The Hidden Order of Arts Education. *British Journal of Aesthetics*, 31(2), 111–121.
- Ross, J. (1994). The Right Moves: The Challenges of Dance Assessment. *Arts Education Policy Review*, 96(1), 11–17.
- Ross, M., Randor, H., Mitchell, S., & Berton, C. (1993). *Assessing Achievement in the Arts*. Philadelphia: Open University Press.
- Sadler, D. R. (2009). Indeterminacy in the Use of Preset Criteria for Assessment and Grading. *Assessment & Evaluation in Higher Education*, 34(2), 159–179.
- Sawyer, K. (2008). Optimising Learning: Implication of Learning Sciences Research. In Centre for Educational Research and Innovation (Ed.), *Innovating to Learn, Learning to Innovate*. Paris: OECD Publishing.
- Smigiel, H. M., & Barrett, M. (2005). Young Voices: New Perspectives. *NJ Drama Australia Journal*, 29(2), 3–16.
- Soep, E. (2005). Critique: Where Art Meets Assessment. *Phi Delta Kappan*, 87(1), 38–48; 58–63.
- Stemler, S. E. (2004). A Comparison of Consensus, Consistency, and Measurement Approaches to Estimating Interrater Reliability. *Practical Assessment, Research & Evaluation*, 9(4), 1–19.
- Sternberg, R. J. (Ed.). (1988). *The Nature of Creativity: Contemporary Psychological Perspectives*. Cambridge: Cambridge University Press.
- Sternberg, R. J., Kaufman, J. C., & Pretz, J. E. (2002). *The Creativity Conundrum: A Propulsion Model of Kinds of Creative Contributions*. New York: Psychology Press.
- Taylor, P. (2006). *Assessment in Arts Education*. Portsmouth: Heinemann.
- Thomas, A., & Millard, B. (2006). Towards Enhancing Student Learning and Examiner Reliability with Criterion-Referenced Assessment in the Creative Arts: The Case of Music. Paper Presented at the *Evaluations and Assessment Conference, Perth, 30 November – 1 December*. Retrieved April 1, 2018, from <https://eprints.qut.edu.au/24868/>
- Tierney, R., & Marielle, S. (2004). What's Still Wrong with Rubrics: Focusing on the Consistency of Performance Criteria Across Scale Levels. Retrieved March 29, 2018, from <http://pareonline.net/getvn.asp?v=9&n=2>
- Tomlinson, C. A. (2001). Grading for Success. *Educational Leadership*, 58(6), 12–15.
- Treffinger, D. J. (2009). Myth 5: Creativity Is Too Difficult to Measure. *Gifted Child Quarterly*, 53(4), 245–247.

- Vandermeulen, C. (2011). *Negotiating the Personal in Creative Writing*. Bristol: Multilingual Matters.
- Zucker, S. (2004). *Scientifically Based Research: NCLB and Assessment*. San Antonio: Pearson Education.



12

Tearing It Down: Using Problematisation to Encourage Artistic-Creativity

Shelley Hannigan and Katherine Barrand

Introduction

This chapter explores our rhizomatic work across decades, to investigate creativity in our practices as teachers, researchers and artists. The theoretical perspective of problematisation is used to inquire into these three overlapping practices as a/r/tographers to identify problems of creativity in art education and to find solutions.

We both live, work and practise in regional Victoria, Australia. Author 1 was an artist for twenty years before becoming an art teacher. She has been lecturing in art education at university for a decade and maintains her visual and community-based artistic practice. Author 2 began her career as a secondary school art teacher and now lectures in experiential learning at university, is a practising artist and workshop facilitator. Our practices as teachers and as artists are each creative in their own way, but

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these different kinds of creativity, in different places and with different social conventions become an issue of problematisation.

There are a number of scholars who write about problematisation as methodology. Freire's (1973) notion of problematisation is that because people are in a constant state of change, social and material engagement and dialogue are both problem posing and problem solving. His definition of problematisation is: "Someone's reflection on a content which results from an act, or reflection on the act itself in order to act better together with others within the framework of reality" (Freire 1973, p. 154). We each reflect on and discuss our practice realities that include: (1) the artistic processes we engage in as artists (and how these are in themselves problem solving processes that we refer to as problematisation), (2) the inconsistency (problems) of shifting this kind of artistic practice to education contexts. As a/r/tographers we experience these two different kinds of reality (artistic practice, and practice as educators) which we refer to as problematisation. We discuss both of these practices as we explore systems of education and the wider artworlds that sometimes clash around issues including: social conventions, organisational cultures and definitions of creativity.

Methodological Considerations

As a/r/tographers we are engaged in a dialectical interrogation of our own practices as artists, educators and researchers. Situated in these multiple creative fields, we identify problems that generate research questions. Alvesson and Sandberg (2011, p. 256) explain, "a key task in generating research questions through problematization is to enter a dialectical interrogation between one's own and other meta-theoretical stances so as to identify, articulate, and challenge central assumptions underlying existing literature in a way that opens up new areas of inquiry". In addition to engaging a range of research projects using different theoretical lenses, we reflect on our practices in and outside of university – in schools where we once taught art, in university where author 1 continues to teach art to pre-service teachers, in community art workshops led by author 2, and in our own artistic practice that usually takes place outside the university context.

In response to the topic of this book, *Creativity policy, partnerships and practice in education*, we acknowledge the dialectical, opposing position of problematisation (Au 2007) as a way of teaching art that is experiential and risk-taking, against an education system that is often unsupportive of these practices. As a/r/tographers we are constantly positioned in this layered interrelated and sometimes polarising and conflicting system. Due to the way teaching sometimes needs to conform to rigid systems (e.g. curriculum, timetables), it can appear to arts professionals that teaching art, veers away from real artistic practice and processing. It can appear to managers of educational institutions that messy and socially activist or place-experience artistic processes and practices don't always suit schools and universities.

A/r/tographers appreciate the flowing, ever-moving folds in multi-practices between artistic practice and teaching, rather than seeing these as separate practices joined by a bridge (Irwin and Springgay 2008). A/r/tographers explore practice(s) in and through writing and art. As we each write, and write collaboratively, problematisation in conjunction with a/r/tography allows us to incorporate "a dialectical interrogation of our own familiar position, multiple practices, other theoretical stances, and the literature domain targeted to identify, articulate, and challenge different types of assumptions underlying existing literature" (Alvesson and Sandberg 2011, p. 267). Writing over time on this topic and interrogating our writing with each other, has helped us to access the inter-related web of theoretical and practical problems surrounding art making, teaching and creativity. Inspired by Freire's ideas we develop a critical awareness of our social reality in our wide a/r/tographic field through creating, making, teaching, reflection and action.

Defining and Appreciating Artistic Creativity

We are troubled by (i) the many notions of artistic-creative process on the one hand which can make it very confusing to define what art and artistic-creative practices and processes are in different practice areas or spaces, and (ii) how art educators should/can/do teach art within the education context, that is so different to the artworld context. As we observe

different classes where art education takes place, questions arise for us, such as: How do art teachers know or appreciate artistic practice work? Do they bring this into their art teaching? If so, how? and In what modes? What social conventions are they affected by? What social conventions is their art-choice affected by – solo artistic practice, socially engaged art, community-based art, relational aesthetics? and What social conventions is their school affected by? A larger overarching question is: What are art teachers' constraints and opportunities to bring artistic practice and processing into the classroom?

We attempt to translate concepts, practice and processes from the contemporary art world into our education work but find an uneasy fit with timetables, teaching spaces, philosophies and an understanding and appreciation for the more messy creative processes this teaching and the student experience might involve. Other scholars have encountered problems with the way art and insights into artistic practice, translate into education contexts. Harris (2014, 2016) researched this 'creativity problem' by critically comparing modes of creativity that education systems favour and modes that artists tend to work. She notes:

...creativity has taken on an increasingly commodified and marketplace value in contemporary economics (and education) discourses. This is not all bad, and it's not completely severed from more traditional 'artistic' notions of creativity. It does signal a complex and important shift, though, in how creativity is viewed as 'having value' in popular culture. (2016, p. 1)

The reality is that education institutions are based on business models and therefore influenced by capitalist systems (Halberstam 2011; Rolling 2013; Sternberg 2007). Aspects of artworlds are also businesses, as art is bought, sold, collected and grant applications compete for art funds. Therefore the two systems have these realities in common. However, many artists are socially and politically conscious and resist neo liberal values by creating art that can't easily be commodified, or that is about inspiring social change. Importantly, many artistic processes take time and particular place or space considerations and these aspects can get lost in the particular or even limited time, spaces and places of schools and their particular set of social values they hold for art's worth.

Our Definition of the Artistic-Creative Process

Fundamental to an artistic-creative approach to teaching and learning is how motivation is fostered for students and teachers (see Baugley 2007; Porter 2004; Dweck 2005), and the way that problematisation is inherent to the artmaking process. There are many kinds of artistic processes and definitions of art, thus another problem we encounter is that the many definitions of artistic practice are too confusing for education systems and curriculum guidelines to adequately cover. Rolling (2013) shares a similar point:

The way one defines art radically changes the practical applications of creative outcomes as well as the perceived identity as preserver and expresser of potent tales, or artist as shatterer of beliefs and expectations, or artist as conjurer of unimagined magic. Definitions matter. (p. 5)

Our definition of artistic-creative processes is guided by the knowledge that teaching for artistic creativity through art requires teachers to draw upon a variety of qualities and practices. These qualities include recognising that artistic-creative processes are themselves problem-solving processes that involve trial and error and that the problems inherent in the process can end up being the artworks or performances themselves.

Being experimental and experiential whilst engaging such processes is important as the creator(s) must engage the process in an embodied and reflective way and be aware of what is happening on a number of levels. As soon as the creative process of an artwork or art performance begins, (an idea, a brush mark on the canvas, musical notes) the creator has a problem to experiment with and find some kind of resolution. This process involves making important choices (Morgan 2005) and can be risky (Eby 2017; Feist 2016; Poorsoltan, 2012), as what has already been created may be lost in the evolution of the process. This act of composing and creating is different to illustrating a pre-set idea or design, where chance plays very little part in the making process.

More productive, contained, and controlled models of creativity have the benefit of being explained clearly, drawn as neat understandable problem-solving diagrams, and therefore 'sold' to parents or other

stakeholders as successful models to tick the box of ‘creativity’ in schools. Such ideas influence stakeholders of art education practice, such as principals, parents (Lee 2014), and ‘families, teams, clubs, relationist groups and other social settings’ (Ward 2007, p. xx). This perpetuates education as one that covers creativity competencies but doesn’t always support artistic-creativity. This is particularly evident in the time and space required for inherent material, conceptual and aesthetic development of art, and meaningful problem solving that artists require, compared to what schools offer.

Culpan and Hoffert (2009) support an artistic approach to creativity, suggesting that ‘while creativity is broader than any art activity, the arts in general are central to what creativity means, and the context in which the outcomes of educating for creative ability are most clearly demonstrable’ (p. 11). Although Dweck (2005) suggests that anybody can be taught new ways of learning, it does need to be acknowledged that teaching for creativity in art education is not a simple undertaking as it requires students to put time into creating as well as responding; developing techniques, working in and with mediums and materials then through contemplation and reflection, working out meaning, interpretation and analysis. As Robinson (2009) points out, teaching creativity is not something that is a free-for-all activity, as creativity is a complex skill that demands high levels of organisation and commitment. He notes that essentially, creativity is a process that is one of the most valuable assets we possess requiring “skill, knowledge and control” (p. 23).

Students need to understand that the creative process is just as important as the final outcome, especially in the art classroom (Australian Curriculum and Assessment Reporting Authority, 2013), and it is the teacher’s responsibility to create conditions that favour such artistic-creativity to flourish. For educators, teaching for creative play is one way to ensure that this flexibility of approach maintains its importance in the classroom (Greene 1998; Vygotsky 1925/71; Szekely 2009). Our research seeks to address potential and compounding problems of art education pedagogy (Gatt and Karppinen 2014) and a system that does not understand or value artistic creativity, or really understand its unique difference from other modes of creativity (Harris 2014, 2016; Rolling 2013). Like Freire, we look to social contexts as they perpetuate, drive and solve problems.

Conventions

Our research identifies incompatible conventions between artworlds, art education and the wider education context that are sometimes underpinned by issues of space, place and identity. For example, the place of the artworld and place of the educational institution each contain within them people who identify with those particular places and conventions. When ‘types’ of art and types of creativity start to become the norm in a particular school, it is because the participants of that social and cultural environment teach and support it. A case in point is a secondary school student who for his final year achieved a high mark along with three awards for his portrait paintings, but a low mark for his experimental video that he himself felt was stronger, took more working hours and experiential, conceptual development, involved more experimentation and more technological skill. This school community had perpetuated preferences for an older more conventional mode of art (portrait painting) than a more contemporary, digital and multi-modal one. As Becker notes, it is the “conventions known to all well-socialised members of a society that make possible some of the most basic and important forms of co-operation characteristic of an art world” (2008, p. 46).

Problem Settings

Much contemporary art takes place in social settings through community art, public art and many other genres (see Abdullah, 2018; Moomaw, 2016). These social, cultural, political, aesthetic and place-based aspects of artistic practice work can be difficult for students to engage in due to the timetable, spaces and limited curricula in some education institutions. This is a complex problem but Suchman’s (1996) idea of problem settings throws some light on it: Reeder (2012) teaches different groups in place-based and creative ways which enables her to explore creativity with her students and teach in different contexts which in turn, makes her notice the ‘constraints of school systems’ (p. 163). Cushman (2014) takes Suchman’s (1996) idea of problem settings and Schön’s (1983) concept of reflective practice as an alternative to the linear process of problem solving, and explains:

In problem setting, processes are not a given because a process, in general, presupposes a means–end analysis in which both the starting position and the final goal are well defined. Processes require given problems. The practice of problem setting, however, means attuning ourselves to instability and indeterminate situations, acknowledging that processes and problems are mutually constituted. The problem solver, the problem, and the problem-setting process cannot be separated out and treated individually (2014, p. 330).

This quote encapsulates the problem setting that we find ourselves in as art educators who understand the practice-activities and benefits of artistic-creativity but are sometimes prevented from engaging in what we believe to be useful art education practices and settings properly.

The Importance of Identity, Place and Space

Artists explore lived experiences through art, place and identity so these dimensions should ideally play an important role in art education. Dear (2011) finds that “most artists readily concede the significance of place in the creative process” (p. 9). Sullivan (2005) notes that there is an “emphasis on identity construction in the visual arts, as artists in particular search for self and place” (p. 172). This is evident through exhibitions that focus on place and identity in Australia such as *Home & Away: Place and identity in recent Australian art* (Shepparton Art Gallery, 2003) and *Spaced: Art out of place* (Freemantle Arts Centre, 2012).

Halford and Leonard (2006) posit that, “Places are invested with particular meanings; they interplay with the discursive and material conditions in which we are situated” (p. 11). This has exciting potential for exploring the materiality of the school environment on field trips and materials brought into the arts classroom (from home, from the beach, from the rubbish dump etc.). Place and identity are interconnected (Malpas 1999, 2006, 2012) which means that students, teachers and a/r/tographers experience their place with particular identities. Recognising that we each have our own bundle of place and identity experiences (see Malpas 1999, 2006, 2012; Heidegger 1951/2011) is a way to be inclusive as it reminds us how we have unique identities which often form complex interactions in and with our places and contexts.

Place and Identity of the Current Art and Educational Climate

It has become a well-worn trope that the problems of the 21st century are going to be ones for which we have no specific training (Krueger 2017; Robinson 2009; Razzouk and Shute 2012). This means that rather than rely on models of working that train for specific career paths, students need to be taught to be adaptable and creative enough to find solutions to as yet unknown problems (Robinson 2009). This need is reflected in the increasing demand for creativity in Australian graduate job listings which list an increase in the demand for creativity of 65% between 2013 to 2016 (FYA 2016) and the need for interdisciplinary teaching and self-directed learners of the future (see Kruegar 2017).

Yet the education systems that we work seem to prioritise over disciplines and specify time, space and location. The timetable serves as a visual guide to these limitations by separating individual subjects into categories, placing them within strict time boundaries, and dictating the places of creating, presenting and performance. We find that these boundaries limit the interactions that are vital to encourage artistic-creativity in education.

Limitations of time and space effect art education through: (1) the testing model which doesn't suit art education; (2) strictly limited classroom time which leads to the interruption of creative flow – this is in direct contrast with the relative freedom experienced by many practising artists; (3) insufficient spaces provided in schools for art (art rooms are often separate from other classrooms which creates a degree of isolation and limits interactions between students and between art and other subjects).

Artistic practice takes time and can involve a myriad of spaces as students move out into landscapes, galleries and social spaces, and back into the classroom or studio. Sternberg (2007, p. 15) suggests that, "Part of being creative means being able to work on a project or task for a long time without immediate or interim rewards" Our research shows how students can sometimes feel stressed with the notion of having to change a developing artwork project within busy university or school timetables and advancing assignment due dates. Willcox (2017) proposes a solution to this, detailing ways students develop their art and ideas in visual

journals that are not assessed, as a safe space for them to be vulnerable and to take risks. Careful assessment strategies that provide clear criteria with space and time to engage the creative-artistic processes we have defined in this paper, are key (see Hannigan 2018). To make artistic-creativity work in schools, place needs to be considered along with sufficient physical spaces and time-frames (see Gatt and Karppinen 2014).

Systems in the Artmaking Process: Destruction and Reconstruction

Our research digs deeper into our definition of problematisation which we find to be at the heart of our a/r/tographic work and therefore art teaching and learning. Within creative-artistic processes are destructive and reconstructive phases that we feel need to also find their place in art education and be supported by education systems.

The destructive stage in artmaking is a visceral intervention by deliberately destroying what is already there. The need for this process can arise during the artmaking process if the emerging work becomes too tight, or the work is failing to capture our artistic motivation and we start to become bored with the work. Additionally, we may utilise this type of intervention if we find ourselves starting to illustrate an idea rather than responding to what is emerging in the making process. For example, when engaging in the painting process, this intervention may take the form of throwing paint at a developing painting to engage the materiality of the work or to interrupt the emergence of an image we are not content with. This then allows us to view the work afresh and creates a new problem to solve. Another destructive phase can involve turning a developing picture or artefact upside down to see it differently. The artist, Georg Baselitz's did this in his paintings which changed a portrait to an abstract painting where the form of the paint, brushmarks and colours become more evident than the image. As Baselitz once explained of his paintings, "The reality is the picture, it is most certainly not in the picture" (see Prodger 2014). David Bowie is one of the many musicians who engaged in a similar process when writing his songs. This technique was known as

cut ups which involved cutting up and rearranging lyrics on a sheet, jumbling them up to create awkward relationships between disassociated ideas, to form new and unique pairings (see Yentob 1975).

In our artistic processes we are often faced with dilemmas about whether to take the risk and put a mark on a developing drawing for fear it might destroy the picture. To make such a move can ruin many hours of work and it requires courage to overcome this fear. Destructive acts can include switching mediums, shifting the artwork to another place or calling on critical feedback from a colleague, in an attempt to reinvigorate the work and find what it is about or what the art is doing. The act of destroying often triggers a re-constructing act as part of the creative process. Seeing new images, structures and material happenings (such as a paint drip moving upwards having turned a painting upside down) triggers new ideas and creative acts.

These examples are only a few ways that artists can and do utilise problematisation to create new perspectives. Destructive interruptions and acts can be necessary to be constructive in an artistic sense; they are part of the artistic process of what Sennett (2008) refers to as aesthetic, formal and material problems to solve.

Problem creation, provocations and types of resolution in the artistic-creative process, are similar to Sternberg's (2007) suggestion to 'define and redefine problems' or 'turn a problem on its head' (p. 8). Morgan (2005) goes some way to suggest artistic process is more than problem solving by suggesting that 'artists rarely do the same thing twice' because 'they are often digging deeper into a knotty problem' (p. 5). Thus the artistic-creative process we define, involves not only solving problems that might already exist, but creating new problems as part of the creative-artistic process. We try to incorporate this into our art teaching work so that they become conventions in education places as they are in artworlds.

The Problem of Social Conventions

We argue that the destructive stage and reconstructive stages inherent in our a/r/tographic practice work, our creative-artistic practice work and that of our students, should be more valued. In community arts or

relational arts (Bourriaud 2002), artists work with others to explore and problematise a phenomenon and in doing so, work through ways of aesthetically resolving problems in collaborative, social ways and contexts. Sometimes this 'resolve' is to provide an audience with a further provocation for them to engage with. These individual, social and cultural ways of raising problems and working towards resolutions in whatever ways may be suitable, can be powerful ways to challenge social and cultural conventions. These aspects of artistic practice are also exciting opportunities to include in art education as they are widely valued in artworlds (Becker 2008; Foley 2014; TAB 2015), participatory and are real examples of how many artists' work. Even solo, studio-based artists are engaging the social because artists are social beings informed by prior socialisation, which means that art will always be social (Schatzki 2014; Zembylas 2014). Thus social considerations including identity, collaborations, community art, socially engaged art are important dimensions of contemporary art we argue should be taught, learnt and critiqued in art education in and through more risky creative artistic process work.

In doing so, we propose that embracing problematisation and even the value of failure in this in education systems (see Hannigan 2018), would at the same time, challenge conventions outlined above. This is because Art worlds have their own conventions (Becker 2008) as do education institutions and organisations. These conventions are socially and culturally informed and developed as stakeholders perpetuate ways of doing things, preferences and stereotypes. In the art-world, conventions are symbols or styles that become known in a field of art; both artists and participants, or stakeholders, in the art world work together to make conventions emerge. As Becker (2008, p. 42) states, "Conventions provide the basis on which art world participants can act together efficiently to produce works characteristic of those worlds". In education, conventions can be found in the way particular countries or states manage their schooling systems, curricula content and each discipline area also have their own conventions (writing conventions, mathematics conventions and so on) and it is these that we challenge in this paper.

Potential Solutions

As recommendations for policy, practice and education, we have outlined our problems embodying different practices as *a/r/t*ographers and how we find the current education system is somewhat geared away from teaching artistic-creative processes in the way we have defined. We have identified some of the problems that include incompatibilities with the education and artworld systems, not helped by the conventions that emerge in each of these systems or fields – conventions that can potentially inhibit artistic-creativity in education. However we wish to point out that it has been through problematisation; interrogating and understanding the problems of space, place, time and conventions, that we are also able to identify potential solutions.

There have been many approaches to develop creativity in students including debates for an arts centred/led curriculum (Eisner 2005; Ewing 2012) and to integrate teaching creativity within specific subjects (Andrade 2010; Adoniou 2013). Most academics who work in the art education sector, are in agreement that teaching for creativity is something that all teachers should strive for (see Eisner 2005; Ewing 2012; Grierson 2011; Robinson 2009, 2010). Many art educators support taking an active and holistic role in the education and development of selves and societies (Ewing 2012; Reeder 2012; Russell-Bowie 2012).

Robinson (2009) favours addressing creativity across the whole curriculum insisting that there are no subjects in a school environment that exist without creativity at the core for invention and progress. Education institutions may support artistic-creativity by becoming more connected and holistic at the organisational level, using techniques such as “hybrid activity and knotworking” (Yamazumi 2014, p. 69). This Japanese model involves schools working with organisations and communities to challenge each other. Each school or organisation is considered to be a knot because of its somewhat closed system so “hybrid activity and knotworking require and generate new types of agency that engage with the objects shared by activity networks” (2014, p. 68). This is collaborative and community-focused creativity whereby “learning is facilitated by a wide range of individuals and organisations, including producers, experts, volunteer

organisations, and government agencies” (2014, p. 68). Knotworking is a system that supports alternative spaces and generates social and cultural capital, because of the opening up of education spaces and teaching learning zones. Yamazumi reports, “The school provides initiative and oversees the periodic changes and rotations of these facilitators” (2014, p. 68). The different groups that collaborate with the school for learning experiences take turns at offering leadership which emulates real world situations whereby a business calls on consultants, and different members of an organisation take the initiative to work together.

This model embodies Vygotsky’s (1925/71) notion of the individual and social dimensions working together in creative processes as part of the Zone of Proximal Development (ZPD). Holzman (2010) explains ZPD as “an entity existing in psychological-cultural-social space and time,” but emphasises her own interpretation of ZPD is more a process and activity rather than a “spatio-temporal entity” or a “zone, space or distance” (2010, p. 30).

Vygotsky’s Zone of Proximal Development (ZPD) (1925/71) provides a useful model for creative-artistic art education, as it refers to what a student is capable of learning and the guidance needed to make learning happen. It is “a space for novices to learn the culture’s ‘right way’ from experts” (Moran 2010, p. 145). Such ways that promote artistic-creativity in art education include teacher education programmes that partner artists and student teachers to ensure artistic-creativity is taught (Horowitz 2005; Morgan 2005; Nicoll 2005; Watts 2005), with a focus on experiential and experimental processes. Vygotsky(1925/71) encouraged transformation of the ZPD through creative expression and meaning-making, recognising artistic-creative processes as a way of expressing emotions and the subconscious. Moran (2010) uses the idea of a ZPD misalignment to suggest a way in which schools could be more creative. He suggests that, in schools, “misalignment of ZPDs is not seen as fruitful, but as dangerous. Thus, cultural possibilities are often inhibited” (p. 145). In the field of art education, we misalign ZsPD (Zones of Proximal Development) by keeping up with contemporary art and translating this work into relevant art education activities, encouraging students to visit art galleries or artists’ studios, engaging in participatory or socially engaged art projects and/or arranging for visiting artists to teach. These approaches allow fieldwork and place-based knowledge from arts practices to permeate the school walls and teach students in, through and about art in the real world.

Reeder's (2012) approach as artist-researcher-teacher is a good example of misaligning a ZPD. She explored the hyphenated multiple practice-roles by taking students to see an exhibition, *Rigo 23*, about the artist Leonard Peltier who had spent time in prison. "Leonard was intentionally portrayed as both a prisoner and as an artist" (2012, p. 162) or artist-prisoner. These multiple roles of the artist, and the way the exhibition was presented to make visitors feel like they were in prison, generated discussion, and assigned roles and identities of staff and students were questioned. This led to them all choosing to use their first names to refer to each other, rather than role-names, such as teacher, student, and artist. By stepping out of the school structure and system, children were able to learn more about the blurred lines between multiple roles, identities, and practices of any one person – as it is in the real world.

Public pedagogies (Charman et al. 2017) or socially engaged art projects are a way to misalign ZPD's by keeping up with contemporary art situated in community. Public pedagogies open up new possibilities for knowing place-based knowledge through contact zones (MacGill 2016) in communities where interesting culture and art happens. Public pedagogy projects in Melbourne's western suburbs included a Pop-Up School in the suburb of Footscray to find the socially informed and engaged knowledge and practice from within this Footscray suburb. As Charman et al. (2017, p. 57) explain:

At the Pop-Up School in Footscray, knowledge mattering was present as a flow of matter: the walls that bounced back the sounds, that roughed the images pasted up by the schools and the scrawling's of poetry from participants.

and

Knowledge was brought to matter in maps and stories; dancers and singers; the fire of the leaves burning for welcome; fire to make message sticks; the drawing on sticks by child and by adult; the smashing of knowledge mattering piñatas of racial stereotypes made by young Vietnamese teenagers.

An intention of this public pedagogies research, is to understand what a local, holistic and place-based curriculum might be along with its unique artistic and creative processes from that social and cultural dynamic.

Conclusion

Methodologically, embodying the multiple problems within our multiple systems of practice as a/r/tographers, has allowed us to process problems and find clashes and inconsistencies at levels of the social and cultural; problems that perpetuate conventions that are problematic to the transferal of artistic-creative practices into education contexts. In the act of artmaking, problematisation gives us a method of disruptive intervention, allowing the creation of unexpected problems to solve when a work becomes tired. In the classroom, the use of problematisation gives us a method of inquiry to examine the place/space/time restraints of our teaching practice. It is the process of uncovering the rhizomatic problems that enables us to find new ways of being and reflecting on not only our own practice, but the systems that underpin it.

Problematisation has given us a method to examine the links between our artistic/research/teaching practices and the problematic creative-artistic processes that we value. It allows us to better collaborate with our students by assisting them to understand the constraints of the education and the artmaking systems and applying the method of problematisation gives them a tool to identify current and future challenges to their practice.

We have unpacked some of the core issues and shared some inspiring examples of how these problems can be addressed. We propose that misaligned ZPD's are ways of making changes at cultural-organisational levels, integrating with other communities and in so doing being more democratic, holistic, creative and collaborative. Set within these new kind of conventions, the values inherent in the artistic-creative processes and practices we have defined and the inherent problems these processes engage students, may be a good model for valuing and translating artistic-creative ways into art education, and give educators and students a lens to begin a critical dialogue to explore and challenge conventions.

References

- Abdullah, S. (2018). The Emerging Alternative Practices in Malaysian Art (1990s–2015). *Art and the Public Sphere*, 7(1), 25–41.
- Adoniou, M. (2013). Drawing to Support Writing Development in English Language Learners. *Language & Education: An International Journal*, 27(3), 261–277.

- Alvesson, M., & Sandberg, J. (2011). Generating Research Questions Through Problematisation. *Academy of Management Review*, 36, 247–271.
- Andrade, J. (2010). What Does Doodling Do? *Applied Cognitive Psychology*, 24, 100–106.
- Au, W. (2007). Epistemology of the Oppressed: The Dialectics of Paulo Freire's Theory of Knowledge. *International Journal of the Humanities* 6(1):133–140. Retrieved from: <http://www.jceps.com/wpcontent/uploads/PDFs/05-2-06.pdf>
- Australian Curriculum, Assessment and Reporting Authority. (2013). General Capabilities. Retrieved July 31, 2018, from <http://www.australiancurriculum.edu.au/generalcapabilities/general%20capabilities.pdf>
- Baguley, M. (2007). *Partnership or Perish: A Study of Artistic Collaborations* (Unpublished Doctoral Dissertation). University of Tasmania, Launceston, Australia.
- Becker, H. (2008). *Art Worlds*. Berkeley: University of California Press.
- Bourriaud, N. (2002). *Relational Aesthetics*. Dijon: Les presses du réel.
- Charman, K., Dixon, M., Bellingham, R., Thomas, M., & Cooper, J. (2017). Educational Consciousness: Breaking Open the Category of Knowledge in Footscray. *Journal of Public Pedagogies*, 1(2), 55–63.
- Culpan, A., & Hoffert, B. (2009). Creativity Across the Knowledge Continuum. *Journal of Artistic and Creative Education*, 3(1), 8–29.
- Cushman, J. (2014). Our Unstable Artistry. *Journal of Business and Technical Communication*, 28(3), 327–351.
- Dear, M. (2011). Geocreavity. In M. Dear, J. Ketchum, S. Luria, & D. Richardson (Eds.), *Geohumanities: Art, History, Text, at the Edge of Place* (pp. 5–9). Oxford: Taylor & Francis.
- Dweck, C. S. (2005). *Handbook of Competence and Motivation*. New York: Guilford Press.
- Eby, D. (2017). Mistakes Fuel Creativity and Innovation. Retrieved from <http://thecreativemind.net/728/mistakes-fuel-creativity-innovation/>
- Eisner, E. W. (2005). *Reimagining Schools: Selected Works of Elliot Eisner*. Hoboken: Taylor & Francis Ltd.
- Ewing, R. (2012). The Imperative of an Arts-led Curriculum: Lessons from Research. *NJ-Drama Australia Journal*, 36, 7–14.
- Feist, G. J. (2016). A Meta-Analysis of Personality in Scientific and Artistic Creativity. *Personality and Social Psychology Review*, 2(4), 290–309.
- Foley, C. (2014). *Teaching Art or Teaching to Think Like an Artist?* TED Lecture. Retrieved from <https://www.youtube.com/watch?v=ZcFRfjb2ONk#t=372>
- Freire, P. (1973). *Education for Critical Consciousness*. New York: Seabury Press.

- FYA (Foundation for Young Australians & AlphaBeta). (2016). The New Basics: Big Data Reveals the Skills Young People Need for the New Work Order. Retrieved from https://www.fya.org.au/wp-content/uploads/2016/04/The-New-Basics_Update_Web.pdf
- Gatt, I., & Karppinen, S. (2014). An Enquiry into Primary Student Teachers' Confidence, Feelings and Attitudes Towards Teaching Arts and Crafts on Finland and Malta During Initial Teacher Training. *International Journal of Art and Design Education*, 33(1), 75–87.
- Greene, M. (1998). Art and Imagination: Overcoming a Desperate Stasis. In A. C. Ornstein & L. S. Behar-Horenstein (Eds.), *Contemporary Issues in Curriculum* (2nd ed., pp. 45–53). Needham Heights: Allyn & Bacon.
- Grierson, E. M. (2011). Art and Creativity in the Global Economies of Education. *Educational Philosophy and Theory*, 43(4), 336–350.
- Halberstam, J. (2011). *The Queer Art of Failure*. London: Duke University Press.
- Halford, S., & Leonard, P. (2006). *Negotiating Gendered Identities at Work: Place, Space, and time*. New York: Palgrave Macmillan.
- Hannigan, S. (2018). A Theoretical and Practice-Informed Reflection on the Value of Failure in Art. *Thinking Skills and Creativity*. Retrieved: <https://www.sciencedirect.com/science/article/pii/S1871187117301694>
- Harris, A. (2014). *The Creative Turn: Toward a New Aesthetic Imaginary*. Rotterdam: Sense.
- Harris, A. (2016). *Creativity, Education and the Arts*. London: Springer.
- Heidegger, M. (1951/2011). *Basic Writings, Building Dwelling and Thinking*. New York: Routledge.
- Holzman, L. (2010). Without Creating ZPDs There Is No Creativity. In M. C. Connery, V. P. John-Steiner, & A. Marjanovic-Shane (Eds.), *Vygotsky and Creativity: A Cultural-Historical Approach to Play, Meaning Making and the Arts* (pp. 26–39). New York: Peter Lang Publishing.
- Horowitz, R. (2005). Connections: The Arts and Cognitive, Social and Personal Development. In B. Rich (Ed.), *Partnering Arts Education: A Working Model from ArtsConnection* (pp. 32–48). New York: Dana Press.
- Irwin, R. L., & Springgay, S. (2008). A/r/tography as Practice-Based Research. In S. Springgay, R. L. Irwin, C. Leggo, & P. Gouzouasis (Eds.), *Being with A/r/tography* (pp. xix–xxxiii). Rotterdam: Sense Publishers.
- Kruegar, N. (2017). Preparing Students for Jobs that Don't Exist. Retrieved from: <https://www.iste.org/explore/articleDetail?articleid=1002&category=ISTE-blog&article=>
- Lee, T. (2014). 'Inculcating' Creativity: Culture as Public Pedagogy in Singapore. *Discourse: Studies in the Cultural Politics of Education*, 35(5), 718–732. Retrieved from: <https://doi.org/10.1080/01596306.2014.921992>

- MacGill, B. (2016). Public Pedagogy at the Geelong Powerhouse: Intercultural Understandings Through Street Art Within the Contact Zone. *Journal of Public Pedagogies*, 1, 18–28.
- Malpas, J. E. (1999). *Place and Experience: A Philosophical Topography*. Cambridge, UK: Cambridge University Press.
- Malpas, J. E. (2006). *Heidegger's Topology: Being, Place, World*. Cambridge, MA: Massachusetts Institute of Technology.
- Malpas, J. E. (2012). *Heidegger and the Thinking of Place*. Cambridge, MA: MIT Press.
- Moomaw, K. (2016). Collecting Participatory Art at the Denver Art Museum. *Studies in Conservation*, 61(sup2), 130–136.
- Moran, S. (2010). Commitment and Creativity: Transforming Experience into Art. In M. C. Connery, V. P. John-Steiner, & A. Marjanovic-Shane (Eds.), *Vygotsky and Creativity: A Cultural-Historical Approach to Play, Meaning Making and the Arts* (pp. 141–160). New York: Peter Lang Publishing.
- Morgan, C. (2005). Toward an Educational Philosophy. In B. Rich (Ed.), *Partnering Arts Education: A Working Model from ArtsConnection* (pp. 5–8). New York: Dana Press.
- Nicoll, J. (2005). Sequence Across Styles: Curriculum Articulation in Dance and Theatre. In B. Rich (Ed.), *Partnering Arts Education: A Working Model from ArtsConnection* (pp. 9–14). New York: Dana Press.
- Poorsoltan, K. (2012). Artists as Entrepreneurs. *International Journal of Entrepreneurship*, 8, 77–94.
- Porter, N. (2004). Exploring the Making of Wonder: The A/r/tography Model in a Secondary Art Classroom. In R. L. Irwin & A. de Cosson (Eds.), *A/r/tography: Rendering Self Through Arts-Based Living Inquiry* (pp. 103–115). Vancouver: Pacific Educational Press.
- Prodger, M. (2014). Down on the Upside: The Topsy-turvy Painting of Georg Baselitz. Retrieved: <https://www.newstatesman.com/culture/2014/03/down-upside-topsy-turvy-painting-georg-baselitz>
- Razzouk, R., & Shute, V. (2012). What Is Design Thinking and Why Is It Important? *Review of Educational Research*, 82(3), 330–348. <https://doi.org/10.3102/0034654312457429>.
- Reeder, L. (2012). Hyphenated Artists; A Body of Potential. *The Journal of Social Theory in Art Education*, 32, 160–175.
- Robinson, K. (2009). Why Creativity Now? A Conversation with Sir Ken Robinson (A. M. Azzam, Interviewer). *Educational Leadership*, 67(1), 22–26.
- Robinson, K. (2010, October). Ken Robinson: Changing Education Paradigms. [video file]. Retrieved from http://www.ted.com/talks/lang/en/ken_robinson_changing_education_paradigms.html.

- Rolling, J. H. (2013). *Swarm Intelligence: What Nature Teaches Us About Shaping Creative Leadership*. New York: Palgrave Macmillan.
- Russell-Bowie, D. E. (2012). *MMAD About the Arts: An Introduction to Primary Arts Education* (3rd ed.). Frenchs Forest: Pearson, Australia.
- Schatzki, T. R. (2014). Art Bundles. In T. Zembylas (Ed.), *Artistic Practices: Social Interactions and Cultural Dynamics* (pp. 17–31). London: Routledge.
- Schön, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. London: Temple Smith.
- Sennett, R. (2008). *The Craftsman*. London: Allen Lane.
- Sternberg, R. (2007). Creativity as a Habit. In A. Tan (Ed.), *Creativity, A Handbook for Teachers* (pp. 3–25). Singapore: World Scientific Publishing Co.
- Suchman, L. (1996). Supporting Articulation Work. In R. Kling (Ed.), *Computers and Controversy: Value, Conflicts and Social Choices* (pp. 407–423). San Diego: Academic Press.
- Sullivan, G. (2005). *Art Practice as Research: Inquiry in the Visual Arts*. Thousand Oaks: Sage.
- Szekely, G. (2009). *How Children Make Art*. New York: Teachers College Press.
- TAB. (2015). Teaching for Artistic Behaviour Website. Retrieved from: <http://teachingforartisticbehavior.org>.
- Vygotsky, L. S. (1925/1971). *The Psychology of Art*. Cambridge, MA: MIT Press.
- Ward, T. B. (2007). The Multiple Roles of Educators in Children's Creativity. In A. Tan (Ed.), *Creativity, A Handbook for Teachers* (pp. xvii–xxxx). Singapore: World Scientific Publishing Co.
- Watts, R. (2005). Facilitating Partnership, Building Community: Meetings in the Residence Framework. In B. Rich (Ed.), *Partnering Arts Education: A Working Model from ArtsConnection* (pp. 15–18). New York: Dana Press.
- Willcox, L. (2017). Vulnerability in the Art Room: Explorations of Visual Journals and Risks in the Creation of a Psychologically Safe Environment. *Art Education*, 70(5), 11–19.
- Yamazumi, K. (2014). Beyond Traditional School Learning: Fostering Agency and Collective Creativity in Hybrid Educational Activities. In A. Sannino & V. Ellis (Eds.), *Learning and Collective Creativity: Activity-Theoretical and Sociocultural Studies* (pp. 61–76). New York: Routledge.
- Yentob, A. (Producer). (1975). *Cracked Actor* [Documentary]. United Kingdom: BBC Genome.
- Zembylas, T. (2014). Forms of Knowing in the Literary Writing Process. In T. Zembylas (Ed.), *Artistic Practices: Social Interactions and Cultural Dynamics* (pp. 112–150). London: Routledge.



13

From Wise Humanising Creativity to (Posthumanising) Creativity

Kerry Chappell

Introduction

Creativity in education has been proposed as a means to address the rapid, unpredictable changes inherent in the 21st century (e.g. Craft 2013; Facer 2011). These changes bring myriad educational policy and practice challenges, which include: technological integration and its implications (e.g. Craft 2011; Loveless 2007); the tension between ‘education as relation’ and ‘education as transmission’ (e.g. Biesta 2004); and questions of environmental sustainability (e.g. Sterling and Huckle 2014). These challenges are couched in a context of increasing marketisation (Craft 2013) and, certainly in areas of the west, in “an intense form of neo-liberalism” (p. 5) which emphasises “markets, competition and choice” (p. 11, Hall and Gunter 2016). In this chapter I demonstrate that the concepts of creativity in education put forward to date, such as my own collaborative conceptual work with Anna Craft on Wise

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Humanising Creativity (WHC), can only partially address the challenges we face. I am now proposing a different articulation of creativity, one influenced by Posthumanism and New Materialism, which may allow us to think about and action creativity to meet these challenges.

In brief, Posthumanist and New Materialist theorists (e.g. Barad 2003; Braidotti 2013) argue that, alongside humans, other living beings, objects, materials and environments are actually actants (or sources of action). Barad (2003) argues that these ‘intra-act’ with humans, meaning that we should actively consider and respond to the agencies of all different kinds of bodies; and that these other actants deserve more if not equal attention to humans in how we conceptualise the world and action within it. By implication, humans are therefore not superior and controlling of other living beings, objects, materials and environments but are intrinsically enmeshed with them (Braidotti 2013). This theorisation also has consequences for how we understand ethics. Braidotti (2013) argues that we should shift from trying to extend human rights to other-than-humans, to an ‘ethics of transformation’ which encourages ethics to emerge from the enmeshing and interaction of human and other-than-human.

I will argue that by applying these theories, we can move away from humanist driven approaches to creativity to generate the notion of (post-humanising) creativity. This overcomes the problems of humanist conceptualisations because it allows for a full range of ‘players’ within the creative process, it incorporates a different, emergent take on ethics and it allows us to see the future too as emergent, rather than always ‘to-be-designed’. Here the word ‘posthumanising’ is bracketed to acknowledge that this is not intended as a conceptual label in the way of socio-constructivist thinking, but that it indicates a cluster of flexible ideas about creativity that will continue to change and develop as they are worked with, applied and interrogated, and that how they are referred to may also shift and develop in the future.

In order to make this move from humanist to Posthuman thinking about creativity in education, in the main body of the chapter below, I firstly concisely articulate the WHC theory; secondly, whilst acknowledging its strengths, I critique WHC in light of new Posthuman theories; thirdly I articulate the notion of (posthumanising) creativity as a response

to this critique, drawing out the meaning of incorporating diverse actants and acknowledging emergent ethics through two project examples, and describing a current project which is being researched with a (posthumanising) creativity framing. I then conclude the chapter by articulating the significance of this new theorising for understanding of both creativity in education and Posthuman thinking and consider the possible new future research which might ensue, using (posthumanising) creativity.

What Is Wise Humanising Creativity?

The theory is a key current creativity in education theory which I co-developed with the late Professor Anna Craft between 2011 and 2013¹ by combining her Wise Creativity theory² and my Humanising Creativity theory.³ Wise Creativity means that creativity is not value-neutral and that wisdom and ethical judgement need to be considered as part of any creative process (e.g. Craft et al. 2008). Humanising Creativity positions embodied dialogue as the creative driver, where through the interaction of creative process and identity the maker engages in a humanising journey of becoming (e.g. Chappell et al. 2012). Chappell and Craft with Rolfe and Jobbins (2011) and Craft (2012) combined these two together to propose WHC because of a dissatisfaction with existing creativity in education rhetorics (Chappell 2008). These ranged from the cognitive, psychological and play-based, to rhetorics of creativity as social good, as democratic and political, as romantic lone genius and as technologically connected (Banaji et al. 2010). We aimed to contribute to and build on this range of rhetorics by offering a creativity discourse that more dominantly incorporated ethics and was able to challenge existing marketised neo-liberal creativity rhetorics (Craft 2012). By so doing, we argued that WHC could address calls for developing creative approaches to education which could help young people respond to rapid economic, technological and social change in an ethical way (Chappell and Craft 2011). The theory was taken up and developed by us, our collaborators and other scholars between 2013 and 2017 via studies of early years arts education and European studies of technology in education and science education.⁴

Whilst acknowledging the strength of this body of work, the purpose of this chapter is to acknowledge the theory's shortcomings and to look to critiques from Posthumanism to move the thinking on in the form of (posthumanising) creativity. This is with the intention that this idea can ultimately more effectively address the challenges articulated in the opening of this chapter (technological integration in education; tension between 'education as relation' and 'education as transmission'; questions of environmental sustainability and current tensions caused by marketisation and neo-liberal choices).

So, with this in mind, I will now articulate the details of how Humanising Creativity and Wise Creativity were combined into WHC, and show the foundational strengths of the WHC theory. When conceptualising Humanising Creativity, Chappell et al. (2012) articulated how embodied dialogue is the driver of the creative process, and Craft (2012) drew on this when articulating WHC. This dialogue happens via conversations between the inside and the outside (inside-out and outside-in), attending to the 'space in between' or the Chiasm (Merleau Ponty 1964). We drew on Briginshaw's (2001) writing to articulate an ambiguous space of interaction which contains the potential for opening up new possibilities. The "potency of the inside/outside interface" (p. 18) allows for different views to interrelate from inside and outside the body, and provides transformative "potential for new world views" (Bahktin, as cited in Briginshaw; p. 18). I especially emphasised that this dialogue needs to be recognised as embodied, as shared action and ideas which are grounded in our bodies individually, collaboratively and communally (Chappell et al. 2012). In order to support this, I incorporated understanding of Reid's (1980) 'knowing this' or felt knowledge as a necessary way of knowing alongside Ryles' (1949) more well-known conceptions of 'knowing that' and 'knowing how'.

Through this generative, embodied dialogue, I argued (2012) that creators are 'making and being made'; they are on a 'journey of becoming; developing their identities as they develop creative ideas. The humanising process was derived from being conscious that embodied creative ideas have impacts on individuals and communities and that these impacts need to be ethically considered (Chappell 2008; Craft et al. 2008). Humanising Creativity therefore involved an active process of change for

individuals and communities guided by humane compassion and shared values. It came from people engaging in collaborative thinking and joint action to imaginatively develop new ideas which were valuable to them and their community, and which in turn had the capacity to humanely develop individuals and communities. I found Shusterman's (2008) insights here especially helpful, as he reminds us that: "our body constitutes an essential fundamental dimension of our identity... our dynamic symbiotic selves are constituted by relations with others" (p. 2). Drawing on Dewey, he states that:

we are not self-sufficient agents...the relational self acquires and deploys its powers only through its enabling relations...we are...charged with caring for and harmonising the environmental affordances of our embodied selves (p. 214)

I therefore saw (and evidenced through empirical enquiry) creativity as generated by an inside-out/outside-in dialogue which impacted on all layers of identities (Chappell et al. 2012). We characterised this as a journey of becoming within which all creators need to be alert to the ethicality of our actions.

The wise element of WHC derives from Craft et al.'s (2008) book debating creativity, wisdom and trusteeship. This is framed by Craft's early theorising (e.g. Craft 2000) which strongly incorporated Maslow's (1987) humanist idea of self-actualisation, integrated with Gardner and Claxton's psychological takes on the ideas. Whilst acknowledging the environment as an important context, the authors of this seminal tome were clear that creativity in education cannot be "value-neutral" and that we must consider it in relation to "human virtues" (p. 3). In this vein, they begin by drawing on Baltes and Staudinger (2000) to offer two basic criteria for wisdom: "rich factual knowledge of human nature and human life course; rich procedural knowledge of possibilities for engaging with life problems" (Craft et al. 2008, p. 3). They also supplement this by adding Baltes and Stange's (2005) metacriteria for wisdom: "life span contextualism; value tolerance and relativism; knowledge about handling uncertainty" (Craft et al. 2008, p. 4).

Using this theoretical base for wisdom, firstly, they encourage us to think about it as held by trustees, suggesting that cultures need wise individuals who others can look up to and learn their culture's ethics (Gardner 2008). We drew this into our understanding of the 'wise' within WHC, whilst remaining aware that individuals are always situated within a wider group. And secondly, wisdom and creativity need to be considered from a more systems driven perspective. So, they argue that "we are midi-systems in constant reverberation with the hierarchy of megasystems and minisystems" (Claxton et al. 2008, p. 171). These points about wisdom complement humanising creativity's focus on the communal and the need to care for and harmonise the environmental affordances of our actions. Thirdly they suggest that we require "Good creativity and wise action [to] emerge...custom-made responses to the momentary big picture, not interventions based on...an attempt to apply the predetermined rule book of ...technical rationality" (opcit, p. 171). Again, WHC incorporates this idea that good creativity and wise action should be allowed to emerge from people's responses to their situation.

Our development of WHC was therefore grounded in two streams of research, brought together to counter neo-liberal, marketised rhetorics of creativity. These rhetorics are driven by the capitalist imperative of innovation for the sake of its capacity to generate income, and allow little space for contemplating the ethical implications of creative actions. We positioned embodied dialogue at the heart of creativity; we acknowledged the impact of creative action through 'making and being made'; and we argued for responsiveness to the environmental affordances of our creative actions in education. We incorporated the idea that creative ethics should be driven by rich knowledge of human nature, life issues, and value tolerance held by trustees; and that creative wisdom is situated within communities and wider systems, and as being allowed to emerge from people's responses to their situation (Chappell et al. 2011; Craft 2012).

Theoretical Issues

But as WHC has been applied in a variety of research initiatives in the UK and Europe, despite seeing it offer a strong at-scale framework for creative teaching and learning research and enactment,⁵ I find myself

questioning it. And, following her untimely death in 2014, I do this in the absence of my colleague Anna Craft with whom WHC was collaboratively developed, so I ask you to read what follows with that in mind. For me, the theory needs re-appraisal and development in order that it can accommodate relevant new Posthuman thinking, and in order that as a theory it is able to more actively contribute to solving educational policy and practice issues and challenges, such as those laid out in the introduction.

The central WHC tenets of embodied dialogue and becoming resonate with Posthuman arguments such as Barad's (2003) that we need to think of the world and everything in it as 'becoming' through different fluid identities and subjectivities. They therefore remain core to my developing theorising about creativity here. However, the idea of the journey of becoming's ethics as humanising is unseated by the Posthuman argument against the human as dominant, as caring for other-than-humans and as seemingly 'in control'. WHC's inclusion of trusteeship is also challenged by the argument that ethics are personified by particular people, groups or cultures.

It is not that the arguments for considering the ethics of creative action are no longer relevant, or are wrong. It is that they now appear grounded in a false over-prioritisation of the 'human' with their roots stretching back into Craft's early (e.g. 2000) arguments for self-actualisation, and in Craft et al.'s (2008) human-centred cognitive psychology take on wisdom.

In Chappell et al. (2012), with my co-authors, I attempted to distance humanising creativity from outright connection to humanism, by citing arguments from Gray (2002) which push for a less arrogant, human-centred, even, at times, more animalistic take on idea-generation; and by actively prioritising the word 'humanising' rather than the wider theoretical root of 'humanism'. We also see Claxton et al. (2008) emphasising our position as humans within wider 'megsystems', arguing for wise action based in custom-made responses to the momentary big picture. In the same volume Knoop also argues that we need "a greater sense of connection to the natural and material worlds" (p. 172). Their arguments were timely and groundbreaking in 2008, and were sincerely developed by Craft and Chappell into WHC. However, for me now, none of this

goes far enough. As long as the human remains dominant, and is viewed as having the capacity to take control of and solve problems, we will not be able to apply the theory to creatively respond to the educational policy and practice challenges of rapid 21st century change (e.g. technological integration, environmental sustainability). This is because we are not fully acknowledging the partiality of our human perspective or that other-than-humans have strong influences beyond our control.

In light of this, WHC needs rethinking to ensure that it offers a sustainable, responsive theoretical framework for the policy and practice of 21st century creativity in education.

Responding to Challenges from Posthumanism

Whilst the central WHC tenets of embodied dialogue and becoming will remain core to my developing creativity theorising, in the following sections I respond to challenges from Posthumanism to re-think the WHC theory. This means taking a new approach to what and who are seen as ‘players’ within the creative process, and to how the ethics of creative action are understood.

Other-Than-Human Actants

Rather than stating that we should think about the wider system as just context, New Materialist theorists (e.g. Barad 2003; Braidotti 2013) take a bolder step and argue that objects and environments are actually actants or sources of action. This shifts us away from a socio-constructivist humanly superior view, which also implies that particular humans are more superior/human than others, and emphasises instead the importance of seeing humans and objects as embodied and enmeshed. WHC clearly emphasises that humans are embodied (drawing on body philosopher Shusterman 2008) but I would argue that including and recognising other living beings, objects and environments too as embodied and therefore as enmeshed within the creative process better acknowledges the range of sources of action in creativity. Within this ‘enmeshing’ it is important to

understand Barad's point that "things do not have inherently determinant boundaries" (p. 812–813). The boundaries between 'people and people' or 'people and objects' are not as clear cut as we might think from a socio-constructivist perspective. Barad (2003) stresses that she is not letting go of the idea of being human, but that she sees humans as.

phenomena...beings in their differential becoming, particular material re-configurings of the world with shifting boundaries and properties that stabilise and destabilise along with specific material changes in what it means to be human (p. 818)

For me, this suggests that 'who' creates is a less important question than how do we (humans, other living beings, materials, environments, objects – in the broadest sense) create? Barad (2003) also refers to what she calls 'intra-action' as opposed to inter-action because intra-action does not depend on pre-existing bound entities, and more actively incorporates the enmeshed agencies of all the different kinds of bodies involved. This offers opportunities for new understandings of creativity which acknowledge spaces, environments and objects as contributors to the creative process, rather than simply seeing them as context. While WHC argues for creativity as spread between the individual, collaborative and communal layers of human relationships, this solely refers to the human actants. If objects and environments are collaborators and are enmeshed within communal intra-action, we need to recognise a more dispersed kind of creativity resulting from enmeshing.

In order to bring this theoretical difference to life I would like to focus on an example from a recent cross-arts research project. I will therefore provide information about the project followed by consideration of how it can exemplify a more Posthuman take on the multiple actants involved in creativity.

Between 2014 and 2018 I led research into young dance artists' creativity within the *Next Choreography* Siobhan Davies Dance (SDD) project for 14 to 21 year-old young people. The fundamental aim of the project is to develop the cohort's knowledge, skills, insight, and experience to create their own unique choreographic work. As Hathaway and Chappell (2017) state the approach is distinct to SDD in that it encour-

ages young people to look beyond dance to the different choreographic processes used by artists across different art forms. Data was drawn from observations, reflective diaries, questionnaires, WHC wheels (see Appendix 1), and staff and student interviews. Hathaway and Chappell (2017) showed that all the Year 1 young people were on a journey, developing their capacity to work on their own and with others, individually, collaboratively, and communally through dialogue (Chappell et al. 2015). The project's communal approach to studio-based physical dance practice (shown in Fig. 13.1) was seen as key to this (Chappell et al. 2015).

Although Chappell et al. (2015) and Hathaway and Chappell (2017) were viewing the data through the lens of WHC rather than (posthumanising) creativity I contend that the embodied dialogue evidenced in relation to WHC can also be understood as indicative of embodied dialogue within a more posthumanising take on creativity, if we couple it with evidence for the incorporation of other-than-human actants.



Fig. 13.1 *Next Choreography* participants and choreographer engaged in studio-based physical practice together

If we consider the wider context within which the SDD *Next Choreography* project occurs, I would argue that this evidence exists. Firstly, *Next Choreography*, is obviously framed and embedded within Siobhan Davies Dance's practices. Davies may not describe her practice as Posthuman, but there is much in it which gels with a Posthuman frame. For example, one of her recent works is entitled Human-Nature, of which Davies says: "We are as much natural material as plants are and it is in our nature to create with all the materials we can reach."⁶ For me this brings in plants and nature as co-actants in a way that fits within a New Materialist understanding of creativity, and which is suited to addressing the challenge of sustainability that we face by creating *with* nature and raising ethical questions drawn from all actants' perspectives. The fact that artists who participate alongside Davies incorporate living plants into their art/dance, as well as technology, emphasises this point even more.

In this cross-arts work we find provocations to explore the dynamics of the relationship between plants, people and technology and related issues of conscientious environmentalism. The project website suggests that it "may help you to see nature in a new light". This cross-arts practice does not tell you what to see, but offers exhibitions, talks, workshops and performances which offer the possibility of generating new ideas between all actants (including makers, those who experience the project, nature, humans and technology). As Braidotti (2013, p. 107) drawing on Deleuze states.

art [is] an intensive practice that aims at creating new ways of thinking, perceiving and sensing. By transposing us beyond the confines of bound identities art becomes necessarily inhuman in the sense of nonhuman in that it connects to the animal, vegetable, earthy, planetary forces that surround us. Arts is also ... posthuman by structure as it carries us to the limits of what our embodied selves can do or endure

Whilst the manifestation of posthumanising embodied dialogue, enmeshed actants and emergent ethics has not been directly researched in this situation, I have indicated that cross-arts practices connected to both nature and technology such as this provide ripe possible examples of this kind of (posthumanising) creativity in action. In

relation to the policy/practice technology, relationship and sustainability challenges we face, this has particular relevance. This kind of cross-arts work provides a means to change our thinking enough to really address sustainable living within flattened hierarchies where plants take an enmeshed role alongside humans, and indeed technology too, and where the resulting art is allowed to emerge between the actants.

This example enables us to think more broadly about embodied dialogue as the creative driver. A dialogue between the inside-out and outside-in of less-boundaried human bodies, other life forms, ideas, objects and environments becomes less partial, (whilst still acknowledging partiality), and allows more perspectives and actants into the creative process, leading to a richer set of possible new ideas. In turn, the ‘becoming’ of identities/ subjectivities, which is reciprocally intertwined within the creative process within the older WHC theory, is then more dispersed than individualised in this kind of (posthumanising) creativity. WHC already draws on Moje and Luke (2009) to argue for identity as quilted and fluid and this resonates with Barad’s (2003, p. 828) reliance on Kirby (1997), who states that “identity is inherently unstable, differentiated, dispersed and yet strangely coherent”. By thinking of creative process as embodied dialogue which is dispersed and enmeshed across a broad range of intra-actants, as exemplified within the SDD research above, there is a greater chance of creatively addressing policy and practice challenges of technology, relationship and sustainability. The fact that we might be able to enter into becoming with other actants that are the very source of the rapid change and ensuing challenges, makes it more likely that we will be able to effectively live with that rapid change.

Emergent Ethics

The second challenge from Posthumanism that I want to use to move on from WHC is the idea of emergent ethics. If we see creativity and becoming as dispersed ‘beyond the human’ as detailed in the previous section, it follows that the related ethics will be similarly dispersed and will be mani-

festated and articulated differently to WHC's ethics and wisdom, and to the ways that ethics is considered in the 'humanly-conceptualised' policy and practice that WHC has interacted with. Writing from a Posthuman perspective, Braidotti (2013) refers to a "radical ethics of transformation" where "to be posthuman does not mean to be de-humanised". While some scholars (e.g. Horkheimer 1952) have historically already rejected the 'idolisation of the self-gloating I', for Posthumanists this does not go far enough. For Braidotti, it is that the ethical bond is different to the self-interests or even collective-interests of humanism's subjects, who argue for extending (human) rights to all "species, virtual entities and cellular compositions" (p. 189–190). She states that there is an "enlarged sense of interconnection between self and others including non-human or 'earth-others' [which] requires rejection of self-centred individuals" (opcit, p. 47). She goes on to argue that this gives us a "new way of combining self-interests with the well-being of an enlarged community, based on environmental interconnections", using a "partial form of accountability based on a strong sense of collectivity, relationality and hence community-building" (opcit, p. 48), which importantly includes the other-than-human.

Craft et al.'s (2008) scholarship on wisdom, on which WHC relies as part of its ethical framework, does go beyond a purely self-centred, individual ethical perspective. The authors do this through their acknowledgement of collectivity (e.g. Claxton et al. 2008 on megasystems; Knoop 2008 on the connection to the natural and material worlds). I can find some common ground here with Posthuman arguments for agency (Barad 2003) and the embedding of creative action within a dispersed community. However, the kind of agency, systems and trusteeship put forward by the 2008 authors overall, still keeps the human as dominant, and because of this cannot meet Braidotti's expectation that subjectivity and the accompanying ethics are relational and are developed through multiple belongings in and by multiplicity. The ethics and wisdom in this 2008 volume do not go far enough because they maintain a partial human perspective at their core.

So, if the ethics of WHC should shift to become the ethics of a more posthumanising creativity, what does this mean? Ethics generated by relational subjectivity comes from embodied and enmeshed actants. The concerns of all actants are therefore part of the ethics, rather than one

group of actants dictating the ethics for the collective. MacCormack (2012) is helpful here. She argues that

posthuman ethics asks not what the posthuman is, but how posthuman theory creates new, imaginative ways of understanding relations between lives...ethics is a practice of activist, adaptive and creative interaction which avoids claims of overarching moral structures (p. 1)

To achieve this, she repositions the body not to be seen as something to be received or merely for representation, but as the source of posthuman existence and encounter. Here she uses the term ‘body’ in its broadest sense and urges us to understand the relationship between all kinds of bodies and how they affect each other. The accompanying emergent ethics therefore incorporates the embodied other-than-human. Similarly, Miller (2014) discusses an ‘ethics of relationality’, urging us to understand our commonalities with all others through empathy.

As with the first challenge to WHC from Posthumanism, I would like to now introduce an example from a recent research project, this time within digital education, to articulate this more Posthuman take on ethics and the role of other actants too. The research project is *C²Learn*. This was a three-year project designing and trialling a digital gaming environ-

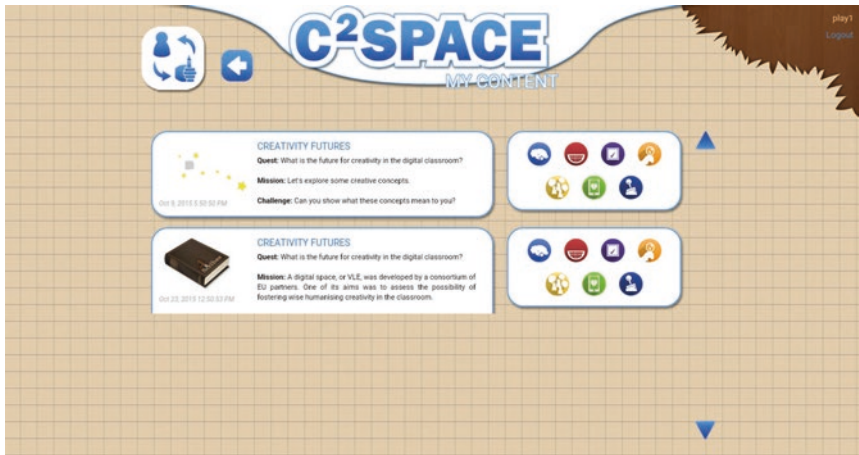


Fig. 13.2 C²Space in action

ment (shown in Fig. 13.2) that aimed to provide young people with multiple opportunities to engage in co-creativity to foster their WHC.

Walsh et al. (2017) presented the digital gaming environment (or VLE), over-arching WHC conceptual framework and evaluation methodology. The VLE was created and trialled with students in England, Greece and Austria and Chappell et al. (2017) reported the projects findings as to how WHC manifested. Data collection tools included interviews, film footage, fieldnotes and the WHC wheel (a precursor to the one used in *Next Choreography*).

Chappell et al. (2017) show detailed evidence for 10–19 year olds that embodied dialogue was a core part of the creativity taking place in *C²Learn* activity in all three countries. The article also shows some evidence for ethics within the creative gameplay which was seemingly generated through the ethics implied within the VLE games and those developed by the young players. I contend that this reflects the fact that WHC argues for an ethics which is relevant to the situation in hand, and in this case, came from the VLE having ethical concerns (from Craft et al. 2008) built into its design.

The process of shifting from WHC to a more Posthuman take on creativity, raises questions about the *C²Learn* outcomes and the challenges that we faced as a research team. How would ethics develop differently if ethics were designed into the VLE in an even more emergent way? How might both the VLE design and the ensuing creativity be different if we, the researchers, viewed the VLE itself as an enmeshed actant? The Posthuman turn on creativity pushes away from perhaps even designing VLEs and content, and suggests that a more fluid approach to technology use in education could be a means to fully incorporate technology as an actant. This would mean seeing the VLE as part of the community of learning or practice and engaging with that as a source of ethical debate inter-woven with and disruptive of the kinds of human-centred debates that were designed into the VLE in the *C²Learn* project.

Another Posthuman-influenced educational philosopher, Osberg (2017), is helpful here. She draws on Jonas, to suggest that the ethics that ensue from technological situations where we cannot see an end to our actions as they ripple out in a digital world, should be thought of as ‘an ethics of long-range responsibility’. The ethical implications of our actions which extend digitally, way beyond our human control, warrant a differ-

ent approach to that proposed in the humanly driven frame of WHC; somehow we need to find a way to enmesh ethicality as emergent from our intra-actions, so that our ethical responsibility remains embodied in the digital ripples.

A means to enmeshing ethicality within our creative processes and actions is through embodied dialogue, which as I have argued above, is the driver of the creative process. As this dialogue between the inside and outside of bodies, ideas, objects and in this case virtual learning environments ensues, it brings in all actants' (VLEs, human, materials, objects and environments) perspectives, which then contribute to the emergent ethics of the situation. What, in WHC, was seen as a humanising process of becoming, defined by humanly driven ethics and wisdom, shifts to being a posthumanising becoming, the ethics of which is fully dispersed amongst humanly, materially and digitally embodied actants. This becoming is relational and grounded in empathy for human and other-than-human. This includes the possibility of non-human empathy, an area which is increasingly being researched, for example, appropriately to this discussion, from the point of view of artificial intelligence (Martinez-Miranda and Aldea 2005). There is not room to explore the notion of empathy further in this chapter, but it is certainly very pertinent to how this idea of (posthumanising) creativity will develop.

Whilst *C²Learn* completed in 2015, there is PhD level enquiry underway which is using a posthumanising take on creativity to move these ideas forward in digital environments. This research may offer opportunities to work emergently to better enmesh technology within educational practices, and perhaps in turn, influence policies. It may also offer technologically-based responses to how we develop 'education as relation' as opposed to 'education as transmission' (Biesta 2004), enabling us to move from seeing VLEs as a means to transmit and hold information to seeing them as an actant which learners can engage with 'in relationship'.

(Posthumanising) Creativity

And so the idea of (posthumanising) creativity maintains embodied dialogue at its heart, but brings in other living beings, objects and environments as embodied, agentic and enmeshed actants. This pushes us to

think about how we ‘intra-act’ to create in a more dispersed way rather than to dwell on who is authoring and what their products are. In turn, the ‘becoming’ of identity/ies or subjectivities and the emergent ethics which ensue from the embodied dialogue, are more dispersed than individualised and solely human, and the embodiment is enmeshed ‘beyond the human’ (Snaza and Weaver 2014, p. 4). This shifts us away from trying to impose human ethics frames or competencies onto the other-than-human and encourages us to think about the ethics of creativity as generated by relational empathetic subjectivity from embodied and enmeshed actants. (Posthumanising) creativity therefore provides us with a greater chance of creatively living with the changes and challenges of technology, relationships and sustainability, and of ‘becoming’ in relation to those changes, because we are actively incorporating the changes’ sources into our creative activities and the ethics through which we judge them.

One of my current research projects (*CREATIONS*) is taking place simultaneously to the development of this (posthumanising) creativity idea and has therefore employed key principles from it as a theoretical frame. I offer it here as an example of a current application and researching of (posthumanising) creativity. *CREATIONS* (2015–2018) is a Europe-wide interdisciplinary arts-science education project, with the aim of better engaging students in science education. The over-arching project uses a specially developed pedagogic framework and creative pedagogical features to design and implement 100 interdisciplinary teaching and learning science/arts activities. These features were developed from University of Exeter creativity theorising and are as follows: Dialogue; Interdisciplinarity; Risk Immersion and Play; Balance and Navigation; Ethics and Trusteeship; Empowerment and Agency; Possibilities; and Individual, Collaborative and Communal activities for change. The Dialogue, Interdisciplinarity, Empowerment and Agency, and Ethics and Trusteeship features especially are underpinned by the notion of embodied dialogue, the role of other-than-human actants in the process and emergent ethics from (posthumanising) creativity. The features are also underpinned by Hetherington and Wegerif’s (2017) argument that science classrooms should pay more attention to material-dialogic relationships especially regarding encouraging empowerment and agency.

We are therefore researching the creativity within *CREATIONS* practices from a Posthuman and New Materialist inspired perspective with the aim that we will be able to provide examples of how (posthumanising) creativity manifests. Figure 13.3 shows early stage outcomes of one *CREATIONS* sub-project. This was one of the 100 activities and is a trans-disciplinary action-research programme. Two strands of the action research focused on work with English secondary arts and science students on the questions of the creative practices and ethics of the use of natural dyes and plastics recycling, and how refraction and density can be exemplified in paint represented in photography.

Within this Action Research programme we are particularly researching how embodied dialogue drives creativity in these situations and how disciplines become enmeshed (Braidotti 2013). Although the research is still at the analysis phase, already early stage outcomes show science and arts teachers working together within the Posthuman frame to merge their disciplines to push against ‘education as transmission’ approaches to work in an emergent and dialogic way that more strongly reflects ‘education as relation’ (Biesta 2004): “One of the things which was really important was them having time for that playfulness to explore rather than being taught it before”, “They’ve all got the concept about science and art



Fig. 13.3 *CREATIONS* Arts/Science Action Research outcomes including natural dyes/recycled plastic photographs and refraction/density in paint images

being interlinked” (quotes from teachers, Action Research Schools). Data analysis is also indicating that students’ emerging identity in relation to dialogue and interdisciplinarity is extremely important as it ties in with how they take agency over the creative process between disciplines.

This idea of enmeshing disciplines through dialogue to allow for emergent educational outcomes resonates again with Osberg (2017). She has mooted the notion of ‘symbiotic anticipation’ (Osberg 2017). She argues that we need to let new ideas come about through symbiotically anticipating with other actants. This generates outcomes which are more than the sum of the parts and needs of the actants involved. This idea is applicable here when thinking about how human (arts and science students and teachers) and other-than-human actants (natural dyes, plastic, paint, cameras) enmesh in the creative process. For Osberg (2017) there are unimagined possibilities which go beyond anything we can ‘vision’ or ‘extrapolate’ before the creative process begins. Indeed, the teachers in the *CREATIONS* Action Research have commented that the outcomes could not have been and were not imagined at the outset but were allowed to emerge through student agency and intra-action of actants (Barad 2003). Osberg and Barad are warning us not to try to vision what the unimagined possibilities might be as this curtails us to what we already know. Osberg especially argues that we need to become better at being in a state of ‘anticipation’ in order to allow for symbiosis, and for it not to be taken over by human perspectives and visions of ethics. I intend to engage with these ideas more in future writing on (posthumanising) creativity, as they show how we might work in a way that allows emergent creativity to happen, and to not limit the future by trying to design it.

Finally, in synthesising the (posthumanising) creativity idea within this section, I would like to acknowledge a potential issue with Posthumanism per se. When working with Posthumanism we must not unwittingly colonise the thinking and academic space previously inhabited by other thinkers and academics be they arts-based or indigenous scholars (Todd 2017). This includes those theorising embodiment, aesthetics and relations with other-than-humans. As I initially began in academia as an arts education academic, I am extremely aware that we should acknowledge and celebrate this work. What is significant about the Posthuman contribution to my theorising is its attention to de-centring the human and its

related emergentist approach to ethics. However, that is not to deny the eminent philosophers and arts education theorists whose ideas about embodiment and dialogue still form a strong core for my ongoing Posthuman-influenced theorisation of creativity.⁷

Conclusion

In this chapter, I have shifted from the idea of Wise Humanising Creativity to (posthumanising) creativity in response to challenges from Posthuman discourses. In so doing, I maintain the imperative of providing an antidote to neo-liberal marketised understandings of creativity in education, detailed in the introduction (e.g. Craft 2005). (Posthumanising) creativity maintains embodied dialogue and an ethically driven journey of becoming as the theoretical core to the creative process, whilst emphasising both enmeshed intra-action with other-than human actants, and the accompanying dispersed emergent ethics.

As detailed in the examples across the chapter, this theoretical shift represents a more hopeful means through which we can use creativity to respond to the challenges of technology, relationship and sustainability, three amongst the many that we face in the 21st century. This is significant because it offers those of us in the creativity in education research community (including all actants) the chance to use a new way of theorising and practising to break the cycle of human actants alone failing to creatively respond through policy and practice to rapid 21st century changes. I would therefore recommend that by viewing practice and policy through the lens of (posthumanising) creativity there is the potential to break this cycle, firstly because it actively incorporates the other-than-human actants that are often the source of rapid change (e.g. nature and technology in SDD practice above), and by so doing, better acknowledges their engagement as influential within the creative process (e.g. technology within VLEs in C²Learn above). And secondly, (posthumanising) creativity allows for emergent ethics from embodied creative dialogue which flows directly from the creative situation in hand (e.g. exploring the ethics of plastic use within emergent arts/science action research practice in CREATIONS above). I would therefore recommend that by considering the ethics of all actants within a community of practice (Barad

2003), rather than allowing human dominance, we can approach policy and practice in a more inclusive and symbiotic way (Osberg 2017) which will allow us to live better with rapid change.

It is also important to acknowledge how this incorporation of Posthuman ideas with creativity in education theorising is significant for the dispersed and growing Posthumanist and New Materialist research communities. Whilst acknowledging the cutting-edge work which has, for example, brought together Posthumanism and New Materialism with arts education (e.g. Hickey-Moodey et al. 2016) and with science and maths education (e.g. de Freitas and Sinclair 2014), the ideas presented here aim to complement this by spotlighting how Posthuman and New Materialist ideas can develop our thinking specifically around creativity in education. In so doing this theorising can offer understandings from creativity in education research which forefront the role of dialogue, relationality and identity as tools to counter neo-liberal agendas. These are coupled with the inclusion of multiple actants and emergent ethics within creativity, in order to address the challenges of technology, educational relations and sustainability that our young people face, no matter what their discipline, and will be responsible for as they become 21st century citizens and leaders.

Looking forward, I can see implications within (posthumanising) creativity as an idea, for further in-depth explorations of how ethics, empathy, identity and aesthetics relate to creativity, and its capacity to respond to 21st century challenges within education. A Posthuman approach also has implications for how we research creativity in education. At the time of writing, Posthuman methodologies in education are emerging (Taylor and Hughes 2016; Bastion et al. 2016). Learning from these, and building on my own previous work with colleagues (e.g. Chappell et al. 2012, 2016), there is a strong case for future research which positions participants in the role of researcher – for example, with colleagues, I aim to research with young dance artists as partner researchers to seek insight into their perspectives and to bring these into conversation with the wider dance field and environment as co-actants. If we take a Posthuman turn on this we allow that there are possibilities which go beyond our own visions and extrapolations (Osberg 2017). We can then take an approach to both creativity and our relationship with the future which is emergent and could allow us to engage in dance policy and practice that incorporates all actants and their implications.

I would like to acknowledge that none of this is easy. Weaver (2014, p. 192) refers to what he calls “the stubborn remnant of humanism” that is embedded, day to day, in our education system, and which Posthuman rhetorics grapple with. One way through this for me is to engage with education colleagues and students as co-researchers, as I have done previously, but to now imbue the foundations of these research relationships with de-centred posthuman understanding. Perhaps this is easier said than done, but if we do not try, Weaver (2014) argues we will remain trapped by humanist assumptions; which in turn I would argue are not conducive to allowing creativity to emerge from the intra-actions of all actants, human and other-than-human.

Finally, Braidotti (2013, p. 195) fuels my determination to continue with these theoretical, empirical and practical creative explorations. She states that.

the posthuman turn is an amazing opportunity to decide together what and who we are capable of becoming, and a unique opportunity for humanity to re-invent itself affirmatively through creativity and empowering ethical relations

What I am arguing for in this chapter is a notion of (posthumanising) creativity which I think can contribute to this opportunity, whilst acknowledging, as humbly as possible, that I am part of how humans, other-than-humans and our enmeshed ideas are in a constant process of becoming.

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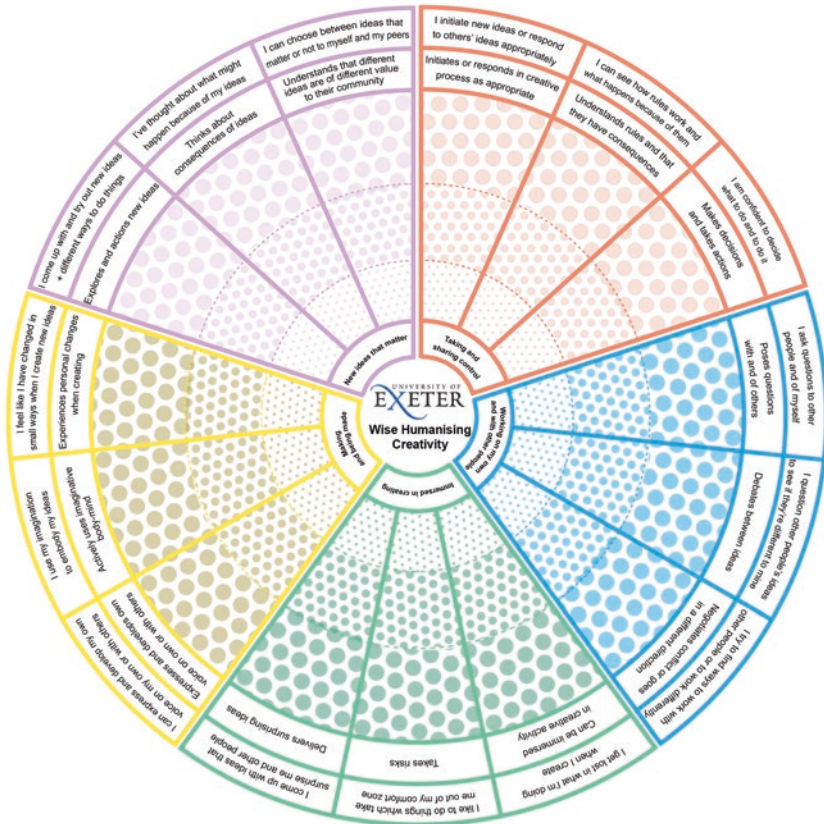
Appendix 1: WHC Wheel

Name (pseudonym):

Date:

Project:

Discussion facilitator:



Put a tick mark (✓) in one box under the statement to show whether you agree a bit, quite a bit, or a lot.

For further information regarding this tool contact:

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Notes

1. Chappell 2008, 2011; Craft et al. 2008; Chappell with Craft, Rolfe and Jobbins 2012; Craft 2013.
2. Wise creativity: Claxton et al. 2008; Craft 2005.
3. Humanising creativity: Chappell 2006, 2008, 2011; Chappell et al. 2012.
4. Early years research: Chappell et al. 2016; European studies of technology in education e.g. Walsh et al. 2017; Stenning et al. 2016; Chappell et al. 2017; Schmoelz 2018; science education e.g. Craft et al. 2014; Ben-Horin et al. 2017.
5. WHC application within research e.g. Walsh et al. 2017; Craft et al. 2014; Ben-Horin et al. 2017; Stenning et al. 2016; Chappell et al. 2017; Schmoelz 2018.
6. <http://www.siobhandavies.com/work/human-nature/>.
7. I am especially grateful to Fran Martin and Carol Taylor for conversations on this point.

References

- Baltes, P., & Stange, A. (2005). *Research Project 6. Wisdom: The Integration of Mind and Virtue*. Center for Lifespan Psychology. http://www.mpib-berlin.mpg.de/en/forschung/lip/pdfs/research_project_6.pdf
- Baltes, P., & Staudinger, U. (2000). Wisdom: A Metaheuristic (Pragmatic) to Orchestrate Mind and Virtue Toward Excellence. *American Psychologist*, 55, 122–136.
- Banaji, S., Burn, A., & Buckingham, D. (2010). *The Rhetorics of Creativity: A Review of the Literature* (2nd ed.). London: Arts Council England.
- Barad, K. (2003). Posthumanist Performativity: Towards an Understanding of How Matter Comes to Matter. *Signs*, 28, 801–831.
- Bastion, M., Jones, O., Moore, N., & Roe, E. (Eds.). (2016). *Participatory Research in More-Than-Human Worlds – Routledge Studies in Human Geography*. London/New York: Routledge.
- Ben-Horin, O., Chappell, K., Halstead, J., & Espeland, M. (2017). Designing Creative Inter-Disciplinary Science and Art Interventions in Schools: The Case of Write a Science Opera (WASO). *Cogent Education*, 4(1), 1376926.
- Biesta, G. (2004). Mind the Gap! Communication and the Educational Relation. In C. Bingham & A. Sidorkin (Eds.), *No Education Without Relation* (pp. 11–22). New York: Peter Lang.

- Braidotti, R. (2013). *The Posthuman*. Cambridge: Polity Press.
- Briginshaw, V. (2001). *Dance, Space & Subjectivity*. Basingstoke/New York: Palgrave.
- Chappell, K. (2006, July). Creativity as Individual, Collaborative & Communal. In *Proceedings of Dance and the Child International Conference, The Hague, July 2006* (pp. 42–53).
- Chappell, K. (2008, December). Towards Humanising Creativity. *UNESCO Observatory E-Journal Special Issue on Creativity, Policy and Practice Discourses: Productive Tensions in the New Millennium Volume, 1(3)*. <http://www.abp.unimelb.edu.au/unesco/ejournal/vol-one-issue-three.html> (April, 2011)
- Chappell, K. (2011). Journeys of Becoming: Humanising Creativity. In K. Chappell, L. Rolfe, A. Craft, & V. Jobbins (Eds.), *Close Encounters: Dance Partners for Creativity* (pp. 89–100). Stoke on Trent: Trentham.
- Chappell, K., & Craft, A. (2011). Creative Learning Conversations: Producing Living Dialogic Spaces. *Educational Research, 53(3)*, 363–385.
- Chappell, K., Craft, A., Rolfe, L., & Jobbins, V. (2011). Not Just Surviving but Thriving. In K. Chappell, L. Rolfe, A. Craft, & V. Jobbins (Eds.), *Close Encounters: Dance Partners for Creativity* (pp. 143–160). Stoke on Trent: Trentham.
- Chappell, K., Craft, A., Rolfe, L., & Jobbins, V. (2012). Valuing Our Journeys of Becoming: Humanising Creativity. *International Journal for Education and the Arts, 13(8)*. <http://www.ijea.org/v13n8/> (July, 2017).
- Chappell, K., Slade, C., Phillips, A., Aldridge, L., & Attfield, L. (2015). *Next Choreography Evaluation and Research, Year 1*. London: Siobhan Davies Dance.
- Chappell, K., Pender, T., Swinford, E., & Ford, K. (2016). Making and Being Made: Wise Humanising Creativity in Interdisciplinary Early Years Arts Education. *International Journal of Early Years Education, 24*, 254. <https://doi.org/10.1080/09669760.2016.1162704>.
- Chappell, K., Walsh, C., Kenny, K., Wren, H., Schmoelz, A., & Stouraitis, E. (2017). Wise Humanising Creativity: Changing How We Create in a Virtual Learning Environment. *International Journal of Game-Based Learning, 7*, 50. <https://doi.org/10.4018/IJGBL.2017100103>.
- Claxton, G., Craft, A., & Gardner, H. (2008). Concluding Thoughts: Good Thinking—Education for Wise Creativity. In A. Craft, H. Gardner, G. Claxton, et al. (Eds.), *Creativity, Wisdom and Trusteeship. Exploring the Role of Education*. Thousand Oaks: Corwin Press.
- Craft, A. (2000). *Creativity Across the Primary Curriculum: Framing and Developing Practice*. London/New York: Routledge Falmer.
- Craft, A. (2005). *Creativity in Schools: Tensions and Dilemmas*. Oxon: Routledge.

- Craft, A. (2011). *Creativity and Education Futures: Learning in a Digital Age*. Stoke-on-Trent: Trentham.
- Craft, A. (2012). Childhood in a Digital Age: Creative Challenges for Educational Futures. *London Review of Education*, 10(2), 173–190.
- Craft, A. (2013). Childhood, Possibility Thinking and Wise, Humanising Educational Futures. *International Journal of Educational Research*, 61, 126–134.
- Craft, A., Gardner, H., Claxton, G., et al. (2008). *Creativity, Wisdom and Trusteeship. Exploring the Role of Education*. Thousand Oaks: Corwin Press.
- Craft, A., Ben Horin, O., Sotiriou, M., Stegiopoulos, P., Sotiriou, S., Hennessy, S., Chappell, K., Slade, C., Greenwood, M., Black, A., et al. (2014). CREAT-IT: Implementing Creative Strategies into Science Teaching, 163–179. In M. Riopel & Z. Smyrniou (Eds.), *New Developments in Science and Technology Education*. Switzerland: Springer Link.
- de Freitas, E., & Sinclair, N. (2014). *Mathematics and the Body: Material Entanglements in the Classroom*. New York: Cambridge University Press.
- Facer, K. (2011). *Learning Futures: Education, Technology and Social Change*. London: Routledge.
- Gardner, H. (2008). Creativity, Wisdom and Trusteeship. In A. Craft, H. Gardner, G. Claxton, et al. (Eds.), *Creativity, Wisdom and Trusteeship. Exploring the Role of Education* (pp. 49–66). Thousand Oaks: Corwin Press.
- Gray, J. (2002). *Straw Dogs Thoughts on Humans and Other Animals*. London: Granta Books.
- Hall, D., & Gunter, H. (2016). England. The Liberal State: Permanent Instability in the European Educational NPM Laboratory. In H. Gunter, E. Grimaldi, D. Hall, & R. Serpieri (Eds.), *New Public Management and the Reform of Education: European Lessons for Policy and Practice*. London: Routledge.
- Hathaway, C., & Chappell, K. (2017, July). Next Choreography: Transformative Potential for Young People in Choreographic Practice. In *Exploring Identities in Dance: Proceedings from the 13th World Congress of Dance and the Child International*. <http://ausdance.org.au/publications/details/exploring-identities-in-dance>
- Hetherington, L., & Wegerif, R. B. (2017). Developing a Material-Dialogic Approach to Pedagogy to Guide Science Teacher Education. *Journal of Education for Teaching: International Research and Pedagogy*, 44(1), 27–43.
- Hickey-Moody, A., Palmer, H., & Sayers, E. (2016). Diffractive Pedagogies: Dancing Across New Materialist Imaginaries. *Gender and Education*, 28, 213–229.

- Horkheimer, M. (1952). Begriff der Bildung. In Horkheimer, M. (Hrsg.) *Akademisches Studium; Begriff der Bildung; Fragen des Hochschulunterrichts*. Frankfurter Universitätsreden, Heft 8. Frankfurt am Main (pp. 14–23).
- Kirby, V. (1997). *Telling Flesh: The Substance of the Corporeal*. New York: Routledge.
- Knoop, H. (2008). Wise Creativity and Creative Wisdom. In A. Craft, H. Gardner, G. Claxton, et al. (Eds.), *Creativity, Wisdom and Trusteeship. Exploring the Role of Education* (pp. 119–132). Thousand Oaks: Corwin Press.
- Loveless, A. (2007). *Creativity, Technology and Learning – A Review of Recent Literature*. Bristol: Futurelab.
- MacCormack, P. (2012). *Posthuman Ethics: Embodiment and Cultural Theory*. London/New York: Routledge.
- Martinez-Miranda, J., & Aldea, A. (2005). Emotions in Human and Artificial Intelligence. *Computers in Human Behaviour*, 21(2), 323–341.
- Maslow, A. (1987). *Motivation and Personality*. New York/Cambridge: Harper and Row.
- Merleau Ponty, M. (1964). In J. Edie (Ed.), *The Primacy of Perception*. Evanston: Northwestern University Press.
- Miller, A. (2014). Losing Animals: Ethics and Care in a Pedagogy of Recovery. In N. Snaza & J. Weaver (Eds.), *Posthumanism and Educational Research. Routledge International Studies in the Philosophy of Education* (pp. 104–120). London: Routledge.
- Moje, E., & Luke, A. (2009). Literacy and Identity: Examining the Metaphors in History and Contemporary Research. *Reading Research Quarterly*, 44(4), 415–437.
- Osberg, D. (2017). Education and the Future: Rethinking the Role of Anticipation and Responsibility in Multicultural and Technological Societies. In R. Poli (Ed.), *Handbook of Anticipation* (pp. 1–20). Gewerbestrasse, Switzerland: Springer International Publishing.
- Reid, L. A. (1980). Art: Knowledge that and Knowing This. *British Journal of Aesthetics*, 20(4), 329–339.
- Ryle, G. (1949). *The Concept of Mind*. London/New York: Routledge.
- Schmoelz, A. (2018). Enabling Co-creativity Through Digital Story-Telling in Education. *Thinking Skills and Creativity*, 28, 1.
- Shusterman, R. (2008). *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*. New York: Cambridge University Press.
- Snaza, N., & Weaver, J. (2014). *Posthumanism and Educational Research. Routledge International Studies in the Philosophy of Education*. London: Routledge.

- Stenning, K., Schmoelz, A., Wren, H., Stouraitis, E., Scaltsas, T., Alexopoulos, C., & Aichhorn, A. (2016). Socratic Dialogue as a Teaching and Research Method for Co-creativity? *Digital Culture & Education*, 8(2), 154–168.
- Sterling, S., & Huckle, J. (2014). *Education for Sustainability*. Oxford: Earthscan.
- Taylor, C. A., & Hughes, C. (2016). *Posthuman Research Practices in Education*. London: Routledge.
- Todd, Z. (2017). An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' Is Just Another Word For Colonialism. *Journal of Historical Sociology*, 29, 1. <https://doi.org/10.1111/johs.12124>.
- Walsh, C., Chappell, K., & Craft, A. (2017). A Co-creativity Theoretical Framework to Foster and Evaluate the Presence of Wise Humanising Creativity in Virtual Learning Environments. *Thinking Skills and Creativity*, 24, 228–241.
- Weaver, J. (2014). To What Future Do the Posthuman and Posthumanism (Re) turn Us to: Meanwhile, How Do I Tame the Lingering Effects of Humanism? In N. Snaza & J. Weaver (Eds.), *Posthumanism and Educational Research*. *Routledge International Studies in the Philosophy of Education* (pp. 182–194). London: Routledge.



14

An Ecology of Care: Relationships and Responsibility Through the Constitutive and Creative Acts of Oral History Theatre Making in Local Communities Shouldering Global Crises

Kathleen Gallagher, Nancy Cardwell,
and Dirk J. Rodricks

Introduction and Research Context

Youth, Theatre, Radical Hope and the Ethical Imaginary: An Intercultural Investigation of Drama Pedagogy, Performance and Civic Engagement funded by the Social Sciences and Humanities Research Council of Canada (2014–2019) is an international, collaborative ethnographic research project. The work involves youth, schools, teachers, artists, theatres and social organisations in England, Greece, India, Taiwan, and Canada. Through a collaborative and creative process, we examine issues

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of youth civic engagement and artistic practice from a local-global perspective, using theatre-based, participatory, ethnographic and digital research methods, engaging with students, teachers, social workers and artists as co-researchers.

In all of our sites, we have been witness to cultural, social and artistic performances. Soyini Madison (2005), borrowing from Victor Turner and Edward Bruner (1986), says that cultural performances *show ourselves to ourselves* in ways that help us recognise our behaviour as well as our unconscious needs and desires. Social performances are the everyday, not marked as significant, rather our day-to-day interactions as we move through social lives, inhabiting the specific bodies we do. Erving Goffman (1959) long ago helped elucidate this notion of our everydayness as social performance, the roles we take up in daily life. But, in our research, we are also seeking insight into the artistic performances of young people, as these performances give us critical insight into the world as they know it, but also, as they might *wish* it to be. This chapter then is situated in the borderland between our everyday being and our performative dreams. It is in this borderland, we will argue, that a creative ecology can be most keenly felt.

Civic disengagement has become a distinctive characteristic of contemporary perceptions about young people. However, the emphasis on individual irresponsibility within neoliberal characterisations of youth neglects the crucial components of community and communication in young people's civic interests. For Canadian philosopher Lorraine Code (2006), what she terms "ecological thinking", or "ideal co-habitation" (pp. 31–33) relies heavily on the social imagination. Our theoretical extension of her position is that such a social imaginary can be provoked by, and cultivated through, theatrical and pedagogical imaginaries.

There can be no doubt that growing inequality, economic polarisation, and social dislocation are threatening strong pedagogical models of learning and youth citizenship; interlocking crises (economic, political, ecological, forced migration, war...) are, in short, threatening the very stability of a world order. In this chapter, we reflect upon the impact on our visiting research team from Toronto, Canada, who spent 10 days in Coventry, England, during the tumultuous time of the Brexit

referendum (June, 2016). Our trip to Coventry, a city in the West Midlands of England, where we collaborate with Dr. Rachel King from the University of Warwick, brought us into the heart and history of Theatre in Education in that part of the world, given her association with the Belgrade Theatre and its many youth outreach programmes, one of which is the Canley Youth Theatre.¹ We spent a fascinating 10 days with them, watching, listening, and learning as they moved from the creative process of exploring their individual oral histories to a shared culminating performance. Based on personal stories, precious objects, trusting relationships and even imagined superhero personas, the *Museum of Living Stories* was, in their words a “brilliant” experience for both theatre-makers and their audiences.

And so, this chapter will ask, what kind of ecology makes creative education, performance and research more possible? What animates our conceptions of creative activity, in classrooms, studios, after-school programmes, in research, and in scholarly communities?² Focusing on our Canley Youth Theatre site, our team of Canadian researchers unpack, in this chapter, how creativity was enabled by relationships and by the thoughtful construction of an ecology of care that was at once intensely local but also porous to ‘outsiders’, a borderless perimeter encircling an actively caring space. To close, we will describe how our implicatedness in that caring ecology came to affect how we understood and ultimately shared our research with others.

Youth and the Creative Space: Feeling and Caring as Consciousness

Brexit, and the ensuing political discourse, significantly shaped our experience of Coventry and our engagement with the youth.³ Despite the tone of uncertainty and distress, we were witness to many hopeful practices where we not only admired how the young people and their adult collaborators experimented with the drama pedagogy of oral history performance but also how their very practice was a model to us of how to listen with care to others, how to be unthreatened by difference, how to

accommodate a diversity of views and how to respond creatively even in the darkness of a political moment.

Our visit coincided with their final week of the creative process of their oral history performance. We soon discovered that the youth, theatre facilitators, and social workers had developed a ritual with which each rehearsal would begin: Story Share. The ‘story-share’ ritual involved everyone sitting together in a circle and talking about one event they had experienced or thought about since the last time they convened in the circle. Everyone – young people, graduate students, theatre facilitators, social workers, and on this day, we researchers – were invited into the space to share stories from our lives as one gesture on the way to building trust – the foundation of any creative collective process. Below, an excerpt that served as our first exposure to the practices of care of the young people in Coventry (Fig. 14.1).



Fig. 14.1 Martin and Ophelia share a fist bump at Story Share

*Martin*⁴
(12½ years old):

So yesterday I had a day off which was amazing so I, most of the time, I was staying in bed and I completely forgot about the EU thing and then my Mom came in and she was like, "bad news" and I was like "ok we're leaving the EU" and she was like, "yeah". And then like, for about an hour, I watched the stream of the BBC news talking about it on my phone and yeah, because I was really into that because my Dad works [as an engineer] for [a huge car plant] Jaguar/Land Rover which obviously... And they would be, it could be that, we don't know yet, the possibility that they, I don't know, move to a different country. Dad would like either change jobs or stay with them and we move or something like that.

*Rachel (Adult,
Research Collaborator):*

It's... yeah. We haven't put that out there in the room but since seeing you on Tuesday, you know, the world has shifted quite a lot. Just give me a sense as to, you know Martin, that's obviously a big thing for you because it's so close, it's with your Dad. How about the rest of you? Have you been listening to, hearing about... How are we feeling about it? Just give me a sense.

[Lots of murmuring around the room.]

Ophelia (13 years old):

I voted leave.

Rachel:

Can you vote?

Ophelia:

No, no. I mean like we did it at school and I said leave. Loads of people in our school said leave.

John (13 years old):

Can we just hear your opinion why, though there's no problem...

- Ophelia:* Yeah, I don't know, 'cause I just thought, "it's a change" And I don't know what's gonna happen so I just, my Mom and Dad voted leave. I saw what they were voting for so I just sort of I'd follow them, trusting them like if I do it, it's not really gonna... my vote won't be counted anyway but I just voted leave because I'm at quite a young age and it's gonna take time anyway so I thought by the time we like, by the time it's all getting sorted out I'd be like at university, so I'll be like not even at that bit yet. So I just voted leave to see what's gonna happen 'cause I'm quite young yet so it might already be sorted out by the time where I can actually get a job and that, so I just voted leave.
- Rachel:* Let's hope so.
- Ophelia:* Yeah. [Seems to brush hair from her forehead in relief].
- Rachel:* Thank you for sharing that. Is there anything else that was quite ah, a spontaneous chat? Is there anything else you want to say about that before we go back to story time. We can continue these chats throughout the week I think and it might come up, yeah.
- Martin:* I took part in this, like there's a petition on the internet to say that we should host, England should just host another referendum and see how it goes there. There's like a massive, yeah, petition on line with like loads of people are signing it with, saying that we could hold another thing.
- Rachel:* Another one?
- Martin:* And this time not have the politicians like say, try and like, manipulate, not really manipulate us but tell us what to vote. Choose what we want to do or maybe just get all the politicians in the EU, have them all sit down, could be tea and biscuits... To discuss it nicely... [Much cheering and laughter. **Martin bumps fists with Ophelia.**]

How do young people, who find themselves on opposite sides of a critical event like Brexit – one that is likely to shape the rest of their lives – make meaning of this watershed moment, their relationship with each other, and their sense of themselves in the world? What might applied drama practices, by way of oral history performance or “memory making” as twelve and a half year old Martin put it, what might these “memory making” practices offer our collective meaning making of hope and care in precarious times? For Martin, a self-described “*twelve-and-a-half*”-year-old boy with a close relationship to his father, the looming result of the Brexit referendum hit close to home because his father worked with a car-making company based in Coventry. With Brexit on the mind, Martin was forced to consider what the result might mean for him. He offered the following during a subsequent interview with us:

...[the company] can make the decision to move to another country and it's either abandon the job to anyone or move to a different country. Away from friends and family so it's a very big thing and you, I always hope that, “Please let that not happen!” I'm happy where I am. I've built solid, firm friends. I've only managed, at the end of year 7, to build a good friendship because basically in secondary school, being the nerdy kid is not always taken the best by others. But I'm glad that people have accepted me and right now I don't want to move right away from all of that stuff that I've built from the ground up. (Individual interview, 29 June, 2016)

Martin's hard-fought successes in school matter to him, and yet he recognises that he may not have much of a choice in whether he stays or moves, as the unknown consequences of a “Leave” Brexit result unravels. Yet, Martin seemed undeterred. He was invested in community-building before the vote and seemed even more invested after the vote.

It is important to also note that at twelve and a half years old, Martin is already worrying over having to choose between drama and science “because I love them both,” as the education system forces him to specialise, and for Martin, “they [drama and science] are complete opposite things.” Forced to make such a consequential school choice, yet stand by powerless as the most consequential civic vote of his short lifetime occurred without his involvement, we ask: How do we as adults – as educators – reconcile this extraordinary double-manoeuvre of excluding youth

from decisions that will shape their opportunities and communities, while asking them to prematurely shut down their own curiosity, creativity, and openness?

The 1989 United Nations Convention on the Rights of Children (UNCRC) called for the rights of children to have a voice in matters that specifically affect them (UN General Assembly 1989; Cruddas 2001; James 2007; Robinson and Taylor 2007). Yet how often do those who purport to care about the voices of young people move to entrench power relations that effectively discount them and further, back them into making 'choices' that foreclose their creative drive? How often do we fail to hear the voices and stories of youth, casting their narratives aside because of their perceived inexperience? Martin clearly speaks back to the discourse of civically disengaged youth, demonstrating a civic consciousness that proceeds from his deep desire for community.

In speaking about a previous school production he'd been involved in, he described how he came to searching for Canley Youth Theatre:

...When it [the theatre production] went, it felt like part of me was empty. It was gone. There was a portion of my heart or brain that had just disappeared so I ended up searching for this. And I really liked being back in that experience again with tech rehearsals, things going wrong, funny moments and it's like this time we can build it together other than not go straight from an already done script which, I'm not drawing comparisons or saying which one is better, but they're like completely different genres but I really like this 'cause it's just nice working with the rest as a team to create something that's special to everyone in a way. (Individual interview, 29 June, 2016)

Canley Youth Theatre gave Martin something to care about, again, a creative activity to build with others. The oral history performance creative process began with significant personal objects as entry points for youth to enter into the devising work. Here, the youth had to make choices about what object they would show, what memory they would share. The memory shared through the object would become a part of a performance, which was to be shared with a larger audience of parents, other significant community members and the larger Warwick University

drama programme. When asked what it felt like to perform memories while playing yourself, Ophelia responded

This was more honest in a way because it was about you and showing the audience how you've gone throughout your life and a special memory. And I think it's more precious because you're like, sharing it to the audience... So I think by doing this devising piece about you, it's showing us how to be more creative and open-minded about things. (Post-Performance Talkback, June 29, 2016)

Ophelia's words rang true for Martin as well. Martin shared that he enjoyed the process of devising from memory, and especially the idea of needing to "take on the role of memory maker, when [they] weren't given any direction". As we watched the young people rehearse for their performance, we further learned that Martin brought his relationship with his father to his creative work. The object and the memory he chose to share was of a home-made toy that was built for him by his father:

Martin: Ever since I was little, I've just loved inputs and outputs, so I've always loved plugs. Whenever I went around my grandparents' house, we used to get the old plugs and connect them all together. It was really fun. So once, when I was 18 months my dad made me this [shows the home-made toy] ... It doesn't really have a name, or built for any specific purpose – they just called it an amp – something to plug my toy guitar into. It does actually do something, you see? If you press the button it turns on the fan ...

Luke (17 years old): I think this is the best example of love and care of father to a son. It seems of no use, it makes no sense. But the sense is the father wants to let his son play.

Martin: Right. It doesn't matter if it doesn't do anything or if it's useless. What does matter is that a loved one made it for you; they put a lot of effort into it.

When we interviewed Martin, he expressed how he felt about how this memory was captured through the oral history performance process. We noted here how his understanding of care was deeply relational, that sharing a memory and noting how others received that memory with generosity, was how he knew care was operating in his creative process; “it was people using their influence, saying their opinion that I am loved and someone loves me, which is a really nice thing to say, really” (Individual interview, 29 June, 2016). From here, he points to our understanding of care as contagious, as emanating out from a local circle, as moving from smaller to larger communities, and to strangers:

Martin: Care is a lot stronger and more useful force than pretty much anything and that's, you didn't really notice at the start. When reading back those lines and acting it out, it kind of stands out to you. Hang on. This is more powerful. This can connect people from all over the world with similar interests that you never knew exist. And that can bond friendships which is very powerful really.

Kathleen: Do you think there is a way to care about people living somewhere else that we don't see?

Martin: Yeah, there definitely is. Like I think whenever you're, like, doing something or eating something or whatever you're doing, just think, “On the other side of the world, in a different time zone to us, what are these people doing right now?”

Kathleen: Just like, have it in your head...as a way of living!

Martin: Yeah.

The listening we witnessed between the youth themselves during their creative work was especially notable to us. This listening, the hallmark of care as we observed it throughout our 10 days with them, also enacted the responsibility of care. It was a call to relationality where care-giving is unthreatened by disagreement and can make room for difference even when the consequences of those differences are enormous. We could not help but note the impossibility in the adult world of taking in different views around the polarising event of the Brexit vote; it made it all the more remarkable to witness the young people enacting care even when,

perhaps especially when, different views were held. Martin's early interaction with Ophelia offers a singular example of an airing of oppositional views and a deep unrehearsed listening and withholding of judgement.

Through Martin's conscious caring, what political scientist and care theorist Daniel Engster (2005) refers to as the virtues of caring – respect, attentiveness, and responsiveness—he engages with Ophelia when so much is weighing upon him. He listens attentively despite his own feelings or worry about the referendum's consequences. Observing Martin and his engagement with the creative activity, his peers, and with us as 'outsiders,' he exemplified care as consciousness, not merely as an individual gesture but as a memory making practice in theatre and in life. He turned us on to attending to the particular aspects of the ecology we were perceiving.

The Researcher's Reflexive and Theoretical World: Feeling Responsible, Making Meaning

The ground of being of the autonomous Self, is displaced by the *experience-of-becoming* a performing self that acts its identities within a community of others... Humanity as performer, rather than author, of her own identity is always historically situated, culturally mediated, and intersubjectively constituted.

—Dwight Conquergood, "Between Experience and Meaning: Performance as Paradigm for Meaningful Action." (1986, p. 166)

The youth we encountered were clearly deeply invested in diverse relationships as they explored and refined their social and political identities. From the intimate context of family to adult caregivers from community organisations outside the home, relationship-building can be a creative and formative part of these sometimes turbulent years, made all the more turbulent by the destabilising world in which they are growing up. This dialogic "experience-of-becoming", as we witnessed it, manifested itself as the youth relished, resisted and contended with issues that surrounded and complicated their autonomy of voice as engaged local/global citizens who are nonetheless still dependent on key adults in their lives. Through

the theatre making creative work we observed, the youth tested, troubled and transformed their ideas of themselves. It was clear that the Canley youth cared for and about each other in very conscious ways. And we remained fiercely interested in how they were learning to do that, how they were able to listen to each other with generosity and sophistication.

Ethnographer's Research Journal:

I'm coming to realize that research is all about "listening" – like how important listening in life is. A deeply human, deeply necessary skill. Kathleen is on to this. She knows how important listening is and uses Rawlins (2003) to illustrate its transformative potential. He writes (Listening) "announces you as someone potentially open to the other's voice...for if you really hear what the other is saying, you cannot remain the same" (Rawlins as cited in Gallagher 2008a, p. 77). What a gift and I have seen this happen. I saw it happen today in fact. I saw this acted out by twelve youth here in Coventry and I was humbled. How were they intuitively able to listen like that? Where did this maturity come from? How and where did they learn to do that? I have some early ideas about this and it has to do with relationships and stories. (Research journal, Nancy Cardwell, June 23, 2016)

As we watched the youth interact with each other over the course of an intense and dynamic week of rehearsals and performance, we began also to recognise the impact of the relationships they had with the significant adults in their lives, relationships that support, sustain and challenge them as they come to explore who they are and who they are becoming. This would become extremely important for us later as we returned to Canada, tasked with the enormous responsibility of relating our research findings in meaningful ways as momentary adults in their lives, who would speak of them in other contexts. Their trust in the creative process, and in the adults who were guiding them through that, became a dilemma for us as we questioned how to best honour their words and work through intimate, ethnographic portrayal.

As we watched the week unfold, American linguistic anthropologist Shirley Brice Heath came to mind. A phrase from her ethnographic study, *Ways with Words* (1983), a study about children, language and performativity, echoed for us. She called the children in her study "different sorts of travelers" (p. 345) and the Canley youth were indeed different sorts of

travellers as they struggled to make themselves known to each other, the adult facilitators, a prospective audience, visiting researchers, and the world around them. We could almost see the social and cultural hierarchies encircling them; those impervious gatekeepers that define who we are allowed to become. This process of becoming, and their adaptive responses to the intimate circle of adults surrounding them, is constituted and reconstituted by time and place. Moreover, as phenomenologist David Carr (1991) would add, this circumstance of place, politics and relationality adds a causality of ethics and imagination to the truth claims we were trying to make about our/their narrative histories.

The Canley youth were fortunate not only to be in an imaginative space, surrounded by inspiring and caring relationships, but to be involved in the participatory act of theatre making. This multiliterate, multimodal approach to learning, creating and becoming can disrupt those entrenched hierarchies with the happy threat of possibilities, of advocacy, of engagement. At its best, in a collaborative culture of theatre making, everything can shift. The Canley Youth Theatre company members were expected to become narrative inquirers or oral historians, creating an auto-ethnography of sorts, writing and developing the story of who they are. That is a big ask of a twelve-year-old, or of any of us. To reflect on, interpret, and make meaning of our lives is to face up to ourselves. It is a highly creative act, a selective and constitutive act. Watching this happen, we began to draw parallel lines to the type of research we wanted to conduct and in the spirit of their inquiry, to question the kind of researchers we were continuing to become.

Literacy scholars Elizabeth Birr Moje and Cynthia Lewis (2007) write that “learning leaves a residue; it makes a mark on the participant” (p. 16). The Canley youth were full participants but so were we. We could sense, in a very visceral way, how the deeply performative aspects of this research would demand new methods and methodologies of us; we felt a weighty connection between our analyses and any potential legacy of this creative process and relationship-building. This compelling, affective discomfort, or sense of responsibility, continues to provoke our concerns about data analysis, research dissemination and the commitments of public scholarship.

Being deeply moved by what unfolded in Canley and its sustained impact on us as people and as researchers, we began to question what

exactly happened to us as observers in that space, as a way to responsibly unpack our research findings. Oral history theatre making is a form of embodied pedagogy situated at the intersection of art and memory. This embodied way of working was central to our experience in Coventry, to our research and its ongoing analysis. We are concerned with bringing back the body, with paying attention to our affective responses, our somatic experiences and our sensory receptors that precede and inflect any subsequent interpretation. Nicola Shaughnessy, director of Kent University's Research Centre for Cognition, Kinesthetics and Performance, argues that these bodily responses are an integral part of sense making, represented in the dynamic intersections of "embodied cognition, phenomenology, biology, cognitive psychology and cognitive linguistics" (Shaughnessy 2012, p. 4). By recognising the intrinsic relationship between mind and body, we are able to understand how "mental life relies on the somatic experience...and how thought, movement and ethics are all abstract until incorporated through the body (Shusterman 2012, p. 92). This understanding is crucial to how we make meaning of the world around us and these conscious and unconscious values are the foundation of our moral and ethical imaginations. As researchers in a destabilised world, this last part is crucial.

Foregrounding our moral and ethical selves in creative activity and in research, we drew another comparison between what was happening for the Canley youth and what was happening for us as visiting researchers, highly invested in understanding their world through their creative work. Psychologist Tobin Hart (2008) writes about the idea of "contemplative architecture", a sort of geographical imaginary, based on a seemingly impossible principle to "design a building with more space on the inside than on the outside" (p. 235). This architecture is about learning to build "an essential interiority that has inner capacities for discernment, virtue, reflection, balance and presence" (Hart 2008, p. 36). Hart also engages with science, with what philosopher Richard Shusterman calls "somaesthetics" (Shusterman 2012, p. 2). Privileging the body, the senses, and acknowledging the contested realm of the affective world, Hart (2004) describes deep learning as a form of "physiological coherence" citing further research that demonstrates how "physiological changes appear to result in a highly efficient state in which the body, brain and nervous

system function with increased synchronization, ultimately improving cognitive performance” (p. 31). Watching the Canley youth actively build that inner architecture, with the help and modelling of the adults around them, was an important reminder for us to be equally conscious and caring in our continued development as people, as artists, and especially, as researchers. The sophistication of their relational work created for us a kind of challenge.

The Dilemmas of Research Dissemination: Re-imagining Pedagogy and New Performatives

Feminist scholar Claire Hemmings (2011) cautions that the way in which we tell the story is as important as the story itself. Upon our return from Coventry, and as we prepared to analyse and present research findings for an upcoming conference in Toronto, we were preoccupied with two issues that seemed paramount and reflected our own learning over our two weeks in England. How could we do justice to the sophistication and sensitivity of the work and relationships we witnessed in Canley? We desired to share their art making, their relational experiences, and their voices in the most fulsome way possible. How, then, could we best represent their stories, their bodies in space, their intimate community? Ultimately we were drawn to the idea of presenting our research in a way that was reminiscent of their own creative practice, a way of working that spoke directly to our own research interests in hope, care and youth civic engagement. Their own trust in the creative process, and in the adults who were guiding them, became our challenge: how to honour them, to respond to their creative invitation, to be bold and take risks. We had been deeply affected by our time in Coventry and were dedicated to the idea that our research ‘products’, (in this first instance, a conference presentation), would re-create some of the affect, emotion, meaning and community making that we had witnessed in no short supply. In short, we wanted people to be moved just as we were. We wanted to engage with Anne Harris and Andrea Lemon’s (2012) “pedagogical imaginary”

in our dissemination and even “consider new ways of approaching pedagogy that [were] flexible, creative and inherently collaborative” (p. 421). Like the oral history unit the youth carried out, we settled on a less typical conference mode of representation along with the drama of storytelling, as we explored the thin line between fact and fiction, between memory and truth, in our efforts to ‘keep it real’. We designed our conference presentation loosely on the Canley Youth Theatre group’s “Museum of Living Stories” performance. Conference attendees entered a darkened room as the ethereal opening music (Jon Hopkin’s *Immunity*) of the play welcomed them in. On screen, words that would provide only the essentials for context regarding Coventry and our research ideas of *Radical Hope*, faded in and out. While our spoken introduction situated our research project goals and themes, we moved on to bring Canley front and centre through video and audio clips, dramatisation and personal accounts. We wanted the power of their voices, their bodies, that space, and their creativity to fill our space as we gestured towards our research discoveries alongside them.

Imagined Letter from Angela Evans, youth worker with Canley Youth Theatre, to research assistant Nancy Cardwell in Toronto.

Dear Nancy,

It’s hard to believe that it has been almost a year since your visit. A year since that project happened. I’m glad the Museum of Living Stories still haunts you. It doesn’t haunt me in the same way because those youngsters aren’t ghosts to me – all of the youth who created that play last year are still very much alive and well, demanding love, care and attention – but they offer it too, as you know. As you saw. I so wanted you to meet those kids. I wanted you to know them and see them as I did. As I still do. I’ve been thinking about your last letter, your questions about relationships. I loved your quote “relationships grow at the speed of trust”. And they do. I hadn’t thought about it in any obvious way, it was more intuition, but that’s why I felt it was important to meet you all before you met the kids...

You kindly wrote about “my quiet and secure presence” at the back of the room but I just sat there for the most part and looked on. That’s what I meant when I said they were thoughtful, they were caring, they were kind. When Rachel first approached us from the university and described your project Radical Hope – I thought, oh well that’s the Canley group already, just as they

are. Care, hope, young citizenship for sure and loads of fun. They're from all over – Canley, around Coventry. Most of them walk here, though some say they run. It's an outreach program from the Belgrade Theatre so it doesn't cost anything. It couldn't, not for most of these kids and certainly not for our looked-after lads and lasses. I guess you call that foster care in Canada...

I want to focus on your question about stories, what they can do and how they do it. Like you I'm curious about what they do for the teller and what they do for the listener, the witness, the keeper. Not only what they do for them but what they do to them. And the stories are always deeply layered, there are always connections. It's like a rug or a tapestry, framed by context, by politics woven through with people and with places. And thank you for saying it in your last letter, yes, even woven by me a little bit...

I know it got very emotional but I'm not sure why we are afraid of that? Why can't a good news story ring out? Why, as you say, do we almost feel embarrassed by it? That it's not good work or critical work? I think we need to look at that compulsion. It's far too pervasive these days. We needn't spend forever looking for the flaws when we can advocate for possibility, for potential, for hope. I think of Ophelia's dad after the show. It may be a typical story – the arts can save us – but it can also be true. His words were so sincere, you could still hear the anxiety in them. "I'm losing her, I'm losing my daughter. She's struggling." Things had gotten very tense at their house and Ophelia was indeed getting lost. But drama helped. He said it so simply, "when she started to vocalize, to find her voice, I started to understand. I wouldn't just roar back. We could talk to each other again."...

Wait till you hear what our Canley gang have been up to. And before you start to sing my praises, I had very little to do with it. You remember Bruce started it all off with his online petition to stop the closure of youth centres around Coventry. Well it's just snowballed since then. One young woman was so incensed she wrote the Prime Minister about it and received a reply! There has been a peaceful protest through our city centre, surveys, a film première of the movie that Rachel's grad student Hanzhi shot during the making of the Museum of Living Stories and they got a huge variety of guests to turn out for it – teachers, police, firefighters, council officials, parents. Bruce's petition finally gets handed in tomorrow. I shall be supporting him when we go to Council to hand it in. He has been a standout model throughout this process, even going with our Canley boys, Brian and John during the school holiday week last October to the city centre, getting hoards of kids to sign their petition. One further note worth highlighting in all this, the light and life in all this for me and the reason why this work matters: Bruce has been put forward by his peers

to become leader of the Youth Forum in Coventry, and he wants it...that shy young man I first met in January 2016. What a journey. While I am not hopeful that we can resist these changes, I have complete faith in our young people. Drama abounds for them whether on stage or off, and they are up for the challenge.

Now I await your reply. I want updates about you, the research team and about what Radical Hopes are happening in Toronto.

*Send my love to the others, all the best,
Angela.*

A thirty second audio clip of Angela's voice followed this letter read aloud. Angela's warm voice wavered with emotion, punctuated by her deep intakes of breath. "It's about being on the journey with that young person...and when they come off stage and say 'thank you for all that', that means the world to me." (Individual interview, 29 June, 2016) While her voice rang true and was "real", the letter above is not...exactly. It is a work of fiction closely based on the intimate correspondence still maintained between Angela Evans and Nancy Cardwell. Having spent 10 rich days together, our perceptions of this amazing youth worker Angela, imbue her voice here with our active and care-full listening. The letter, then, was a careful compilation of ethnographic research (letters, field notes, transcriptions, audio/video recordings) that foregrounded both the research themes we had uncovered and the relationships we had taken the time to build and care for, relationships that go on living as we carry forward the affect of the creative incubation of our in-person time.

Such a research "product" is controversial perhaps, in a truth-deprived era, but why wouldn't we draw on our imagination as we tried to convey to others the deeply felt-experiences of our presence in that space and in our on-going relationships? Our research then, gains from the depth of relationships, the *creative imaginaries*, the very real experiences *and feelings* of our research. These are not untruths. They are possibly even *necessary* fictions; that is, ways in which our imaginations and sense memories can contain more than documented and transcribed words. In fact, we might suggest that our imagined letter consolidates 'the real' in a faithful betrayal of so-called facts.⁵ Further, this approach felt like the best way, the most respectful, affective and meaningful way we could find to represent the

gripping voices from Canley, in relationship to our own – a blend of scholarly analysis with affective performance – taking our newly gleaned understandings of one creative community into new scholarly communities. It is perhaps also a potent example of how to “more effectively break down disciplinary as well as cultural borders...this process of un-learning, dissolution or shattering” where “creative pedagogies, reiterative cultural performativity, and cross-disciplinary collaboration interrupt educational business as usual and create agency for all collaborators” (Harris and Lemon 2012, p. 429). This is one example of our pedagogical imaginary giving new life to our research, as an honouring of the trusted creative circle we had, ourselves, been welcomed into.

To Conclude

As I have observed, ecological thinking is not simply thinking *about* ecology or *about* the environment: it generates revised modes of engagement with knowledge, subjectivity, politics, ethics, science, citizenship and agency. First and foremost, a thoughtful practice, thinking ecologically carries with it a large measure of responsibility—to know more *carefully* than single surface readings can allow. It might seem difficult to imagine how it could translate into wider issues of citizenship and politics, but the answer, at once simple and profound, is that ecological thinking is about imagining, crafting, articulating, endeavouring to enact principles of ideal cohabitation.

—Lorraine Code, “Ecological Thinking and the Politics of Epistemic Location.” (2006, p. 24)

Our work with the Canley youth and their adult facilitators taught us a great deal about the ethos and habitus of their creative and collaborative work. And more, they inspired us to respond creatively to what we learned in their presence: to listen with care; to invite difference of opinion and action; to imagine ourselves in community; and to reach out to audiences daringly. In a sense, there was a sort of creative spidering⁶ that occurred there, where spidering refers to the web that gets spun around a central core but moves in many directions and to varying degrees of complexity.

Much like a web, creative spidering has no fixed timeline. In our case, we sat with the many resonances for months after our time in Coventry. And then, when we sat down to think through how we wanted to speak of our experiences, we could not help but draw on the interconnectedness and return to the centre of that web – the beginning place, which was the creative work of the students. We wanted to carry forward their ecology of care. What applications might this relational form of spidering have for creativity in general, and the ways in which we think through creativity education and creative research, specifically. What value does creativity have when it comes in “through the back door, or the side door – not bursting in through the front door” (Gallagher 2014, p. 17)? What hope might it give young people, and our world?

Philosopher Richard Rorty coined the term, “social hopes” describing these as “hopes for global, cosmopolitan, democratic, egalitarian, classless, casteless society” (1999, p. xii). Relevant to our study, he explicitly linked hope with democracy and suggested that students following a Deweyan education would “acquire an image of themselves as heirs to a tradition of increasing liberty and rising hope” (p. 121). When everything around the young people in Canley told them otherwise, when the slim majority of the adult world around them voted to blatantly disregard their inheritance in deciding to recklessly reduce their material and imagined opportunities as members of a larger global world, and by their example showed a profound inability to stand with difference, the youth cleared their own path in spite of it all.

Theatre educator Baz Kershaw has argued that drama can produce a growing number of “carriers of hope” (1998, p. 67) and that making drama has the potential to create “currently unimaginable forms of association and action” – “the *transcendent* sense of the radical” (p. 69). We were witness to this in Coventry during the now historic annexing of Great Britain from its larger European community, entrenching- we now know one year later- a deeply divided state. We were privileged, however, as educational researchers deeply concerned with the state of civic engagement for young people, to witness a creative theatre making project that brought into being radically hopeful forms of association and action that continue today. And our responsibility, or one of our responsibilities, is to sing this out from the mountaintops, channelling our real collaborator Angela’s imagined question: “*Why can’t a good news story ring out?*”

Notes

1. Now practised worldwide, the Belgrade Theatre in Coventry is credited with being one of the principal pioneers in the development of the Theatre in Education (TiE) movement, begun in the mid-1960s. TiE gained steady momentum with its compelling mandate to use theatre and drama as a creative way to provide innovative learning opportunities for young people and enliven education through pedagogy and curriculum. Despite greater applications across diverse contexts (schools, theatres, healthcare, community organisations) around the globe, TiE has become increasingly marginalised within national curricula in many countries. The implications of this dwindling legacy are sobering according to Belgrade Theatre Director Justine Themen. “Theatre is all about learning...it holds up a mirror to humanity” and TiE in particular “can be a powerful tool for young people growing up and working out their place in a complex world” (Themen 2017).
2. As authors of this chapter, writing for editors of this series who have, collectively, tremendous expertise in creativity research, we wish to acknowledge Anne Harris’ provocation in her feedback to us. She asked us to consider whether our “quiet backseat creativity” of this chapter- the ethnographic performance work and ecology of care about which we are most insistently speaking- might call out more forcefully to a reinvigoration of creativity research in general. This comment gave us pause and perhaps also helps explain why we have not spoken so directly to, or of, this broad field of creativity in this chapter. Creativity, over the life of our 5-year research project, has revealed itself to us in some of the smallest, most unremarkable moments. It has announced itself most cogently, often, when we were least expecting it. Creativity has often emerged, then, as a kind of antidote to everything else that is vying for attention, a state of affairs that is depleting our creative resources and robbing us of the stillness, or simple gesture, or small arm of aid outstretched. In this chapter reflecting upon our time in Coventry, as with some of the most ‘creative’ moments in the other sites of this study, we have therefore taken refuge in these quiet backseat moments of creativity. Might this be a grander call to the field of creative research to find the creativity in the implicit, earned moments of relationality and imagination, of care, of shelter from the storm?
3. For this visit to Coventry, our team included Kathleen Gallagher, Dirk J. Rodricks, Nancy Cardwell and our artist collaborator Andrew Kushnir.

4. The youth are identified through pseudonyms.
5. For further thinking about the relationship between truth, art and research, please see Gallagher (2008b).
6. Our conceptualisation of this term draws from Nadine George-Graves (2014) use of the term diasporic spidering to describe the ways in which “many different points of intersection and modes of passage may be woven together around a central core – the individual searcher/journeyer” (p. 37).

References

- Carr, D. (1991). *Time, Narrative, and History* (1st Midland book ed.). Bloomington: Indiana University Press.
- Code, L. (2006). *Ecological Thinking and the Politics of Epistemic Location*. New York: Oxford University Press.
- Conquergood, D. (1986). Between Experience and Meaning: Performance as Paradigm for Meaningful Action. In T. Colson (Ed.), *Renewal and Revision: The Future of Interpretation* (pp. 26–59). Denton: Omega.
- Cruddas, L. (2001). Rehearsing for Reality: Young Women’s Voices and Agendas for Change. *Forum*, 43(2), 62–66.
- Engster, D. (2005). Rethinking Care Theory: The Practice of Caring and the Obligation to Care. *Hypatia*, 20, 50–74.
- Gallagher, K. (2008a). *The Methodological Dilemma: Creative, Critical, and Collaborative Approaches to Qualitative Research*. London: Taylor & Francis.
- Gallagher, K. (2008b). Theatre Pedagogy and Performed Research: Respectful Forgeries and Faithful Betrayals. *Theatre Research in Canada*, 28(2), 105–119.
- Gallagher, K. (2014). *Why Theatre Matters: Urban Youth, Engagement, and a Pedagogy of the Real*. Toronto: University of Toronto Press.
- George-Graves, N. (2014). In T. F. DeFrantz & A. Gonzalez (Eds.), *Black Performance Theory: An Anthology of Critical Readings Diasporic Spidering: Constructing Contemporary Black Identities* (pp. 33–44). Durham: Duke University Press.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Garden City: Doubleday.
- Harris, A., & Lemon, A. (2012). Bodies that Shatter: Creativity, Culture and the New Pedagogical Imaginary. *Pedagogy, Culture & Society*, 20(3), 413–433.
- Hart, T. (2004). Opening the Contemplative Mind in the Classroom. *Journal of Transformative Education*, 2(1), 28–46.

- Hart, T. (2008). Interiority and Education. *Journal of Transformative Education*, 6(4), 235–250.
- Heath, S. B. (1983). *Ways with Words: Language, Life, and Work in Communities and Classrooms*. New York: Cambridge University Press.
- Hemmings, C. (2011). *Why Stories Matter: The Political Grammar of Feminist Theory*. Durham: Duke University Press.
- James, A. (2007). Giving Voice to Children's Voices: Practices and Problems, Pitfalls and Potentials. *American Anthropologist*, 109(2), 261–272.
- Kershaw, B. (1998). Pathologies of Hope in Drama and Theatre. *Research in Drama Education*, 3(1), 67–83.
- Madison, D. S. (2005). *Critical Ethnography: Methods, Ethics and Performance*. Thousand Oaks: Sage Press.
- Moje, E. B., & Lewis, C. (2007). Examining Opportunities to Learn Literacy: The Role of Critical Sociocultural Literacy Research. In C. Lewis, P. Enciso, & E. Moje (Eds.), *Reframing Sociocultural Research on Literacy: Identity, Agency, and Power* (pp. 15–48). Mahwah: Erlbaum.
- Rawlins, W. K. (2003). Hearing Voices/Learning Questions. In R. P. Clair (Ed.), *Expressions of Ethnography: Novel Approaches to Qualitative Methods* (pp. 119–126). Albany: State University of New York Press.
- Robinson, C., & Taylor, C. (2007). Theorizing Student Voice: Values and Perspectives. *Improving Schools*, 10(1), 5–17.
- Rorty, R. (1999). *Philosophy and Social Hope*. London: Penguin Books.
- Shaughnessy, N. (2012). *Applying Performance: Live Art, Socially Engaged Theatre and Affective Practice*. New York: Palgrave Macmillan.
- Shusterman, R. (2012). *Thinking Through the Body: Essays in Somaesthetics*. Cambridge: Cambridge University Press.
- Themen, J. (2017). Director Justine Themen on the Rise [Blog post]. Retrieved from: <http://www.belgrade.co.uk/news-and-blogs/blogs/director-justine-themen-on-rise/>
- Turner, V. W., & Bruner, E. M. (1986). *The Anthropology of Experience*. Urbana: University of Illinois Press.
- UN General Assembly. (1989, November 20). Convention on the Rights of the Child. Retrieved from <http://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf>. Accessed 3 Dec 2017.



15

Flexibility, Constraints and Creativity: Cultivating Creativity in Teacher Education

Susan Davis

The Challenge and the Context

While the inter-relationship of creativity and education is deemed important for economic, social and ecological futures, the cultivation of creativity in teacher education receives minimal attention but has been argued to be critical (Harris 2016; Noddings 2013). This chapter reports on the case of designing a new unit and assessment, with this designed to promote creativity for Initial Teacher Education students. The chapter canvases some possibilities, dilemmas and initial findings concerning the use of productive constraints and assessment. The study was based upon a Masters of Teaching unit entitled ‘Teaching Technologies and the Arts’. The research encompasses the design process and two iterations of implementation. Both cohorts had 24 students, who studied in the fully distance mode through an Australian regional university, in 2016 and 2017.

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The research questions for this design and inquiry process were:

- What types of tools and tasks are most helpful for facilitating *practice-based learning* (in the arts and technologies) for ITE students undertaking fully distance and online learning?
- What type of constraints and features of practice and assessment appear most productive for promoting student creativity and confidence in teaching the arts and technologies?

This unit was particularly intimidating to approach as a course designer as not only did it have to be designed for fully online delivery (with no on campus sessions or residential schools) it had to cover the five arts subjects of Dance, Drama, Media Arts, Music and Visual Arts and the two technology areas of Design Technology and Digital Technology. This type of teaching context is one that a number of colleagues have also had to embrace as more universities move to fully online delivery options (Baker et al. 2016; Lierse 2015). As an arts educator I saw this shift as a particular challenge because I had viewed these learning areas as very experiential and embodied, valuing the on campus-sessions which typically focussed on practice-based workshop learning. Furthermore I had conducted previous research with other cohorts of like students who had reported limited prior learning or experience in the arts, and a lack of confidence in their own creativity (Davis 2012).

Ethics approval was granted through the University research ethics committee and no additional material was collected from students beyond what was posted to the course Moodle site, forum postings, assessment artefacts and unit evaluations. Students therefore were not required to provide permission to participate, rather only to indicate if they did not wish their data to be used. These data sets were initially analysed (according to elements discussed later), and in cases where student work was identified as likely to be used in publications, additional email permission was sought from those specific students.

The Approach: An Inquiry and Design Process

A cultural-historical approach to research and learning design was used throughout both the research design and course learning design processes. The research design was particularly informed by the theory of expansive learning as proposed by Engeström (1987). Similar to action research, this research process involves an iterative process driven by participatory need identification, phases of model creation, model testing, implementation and analysis. The learning design process was also approached as an inquiry process, referencing design thinking (IDEO 2011), and a locally developed model as synthesised through the State Library of Queensland's Design Minds initiative (Asia Pacific Design Library 2014). This particular Design Thinking framework includes three main phases, which are *Inquire*, *Ideate* and *Implement*. Figure 15.1 provides an overview of the expansive learning process, with the key phases of design thinking embedded in the centre.

This model was used as the framework for the unit design, informing the design process, as well as data gathering and research process. To conduct the analysis of the implementation of the process and student learning, the artefacts of activity were examined drawing upon key components from cultural-historical activity theory, with reference to systems theories of creativity.

Key features of activity theory analysis were used (Engeström and Sannino 2010) a framework which builds upon the work of Russian psychologist Vygotsky who identified the important role mediational tools play for humans acting within and upon the world (Vygotsky 1978). This framing provides a means for analysing how human *subjects* engage in the world enacting motives or what are called *objects*. The object or idea of what a person want to achieve may be held within a subject's mind, however, realisation of this relies upon mediation through various means – these are variously called tools, instruments, artefacts and signs. These may include physical tools and artefacts but also culturally learned processes and signs such as language.

Engeström's version of Cultural-Historical Activity Theory (or CHAT) includes other key components beyond the basic subject/object/tool mediation triangle (Engeström 2009; Engeström and Sannino 2010).

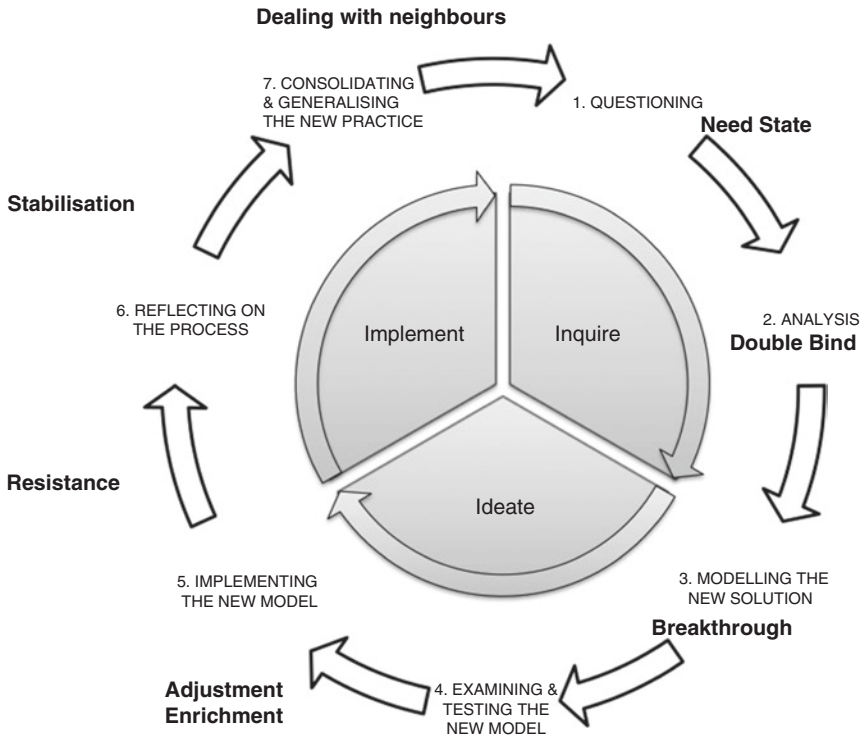


Fig. 15.1 Research and design model with reference to Engeström's cycle of expansive learning and design minds

Engeström developed a triangular representation that depicted the interaction of key components involved in collective activity (1987). In his version of Activity Theory, elements include subjects, and they use a diverse array of mediating tools to work towards achieving goals or objects, acting as part of constituted *communities*. Those activities are mediated by *rules* and a *division of labour* to help coordinate various subjects' actions to create outcomes.

One of the purposes of using activity triangles for mapping the components of activity is to help identify various *contradictions* that may exist within and between components. This is of major importance for creative endeavours as disturbances and contradictions are seen as signalling possibilities for shifts, expansion and learning. Activity system analysis is

therefore concerned with identifying and analysing possible contradictions, particularly when new tools or practices are introduced into an activity system. Rather than these being dismissed, these sites of disturbance, as well as evidence of ‘expansion’ and effectiveness are analysed to inform the creation and refinement of new models.

To further describe the interplay of elements involved in cultivating creativity ‘systems’ models of creativity also identify similar elements (Csikszentmihalyi 1994; Feldman et al. 1994; Gardner 1993; Sawyer 2006). For example Csikszentmihalyi outlines three main elements, the individual, the domain and the field (Csikszentmihalyi 1996, 1999). So there are similar concepts that may be identified in Activity Theory and systems models of creativity with similarities in concepts with: subject/individual, tools/domain knowledge, community/field as well as the idea of outcomes/products.

Figure 15.2 takes the activity triangle that is often used in CHAT analysis, with creativity systems theory elements aligned and added. These features were identified in this study as the basis for thematic analysis of data:

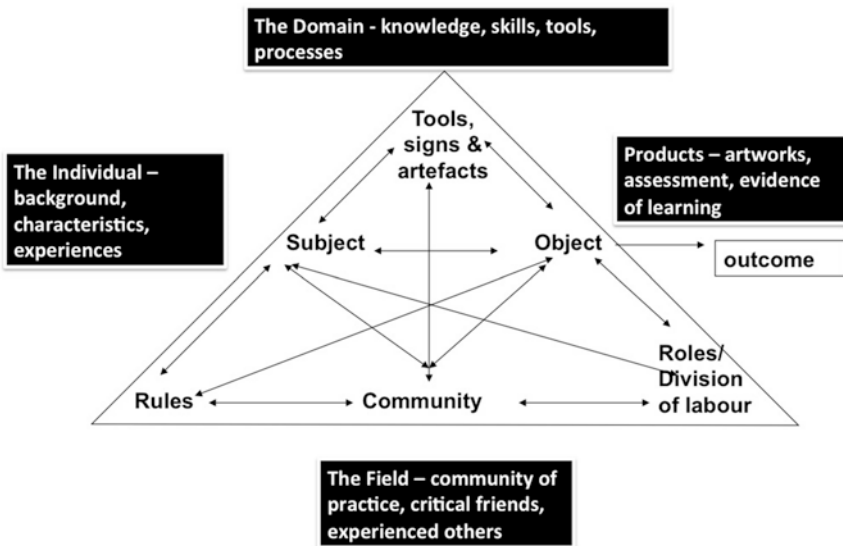


Fig. 15.2 Activity and creativity system elements. (After Engeström & Csikszentmihalyi)

- Subject/Individual
- Tools/Domain
- Community/Field
- Rules
- Roles
- Outcomes/Products

Combining these two frameworks provided a number of core elements deemed important to consider within the design process, but were later used as initial themes for coding and data analysis with this focused on: the subject, tools/domain knowledge and skills, community, rules, roles and outcomes.

Inquire: Need State, Questioning, and Analysis

In approaching the course design and as appropriate to CHAT analysis, an initial inquiry phase focussed on seeking to understand the situation and possibilities through historical analysis as well as reviewing empirical data. This included reviewing relevant literature about creativity.

Creativity and Constraints: Drawing upon the Literature

Notions of creativity were used to provide a common conceptual frame underpinning the unit of work. This meant articulating for the students some understandings of creativity to prompt their reflection and action. Key messaging promoted the idea that creativity is a human capacity that we all use in our every day lives, often when we put things together in new ways. This ranges from little 'c' creativity (Craft 2001) which may consist of a variation on a way of doing something that is novel just for the individual, through to more significant, Big 'C' culture shifting innovation (Csikszentmihalyi 1999; Gardner 1993; Kaufman and Beghetto 2009). The unit would be underpinned by approaches which posit the significance of the individual and the social, the historical and cultural and the value of building some domain or discipline skills and

knowledge to provide some tools for creating (Csikszentmihalyi 1994; Glaveanu et al. 2013). This sociocultural or historical-cultural view is informed by the work of Vygotsky who asserted that everything created by imagination is taken from reality and a person's experiences. "Therefore to cultivate children's [or learner's] imaginations means cultivating the richness of their experiences" (Vygotsky 1930/2004, p. 16).

Furthermore Vygotsky in his work on play as well as creativity and the arts recognised the value of rules and constraints: "...the imaginary situation will always contain rules. In play the child is free. But this is an illusory freedom." (Vygotsky 1966, n.p.). The notion that creativity can be promoted via rules and constraints can appear somewhat contradictory and contrary to views many students and educators have about creativity.

The importance of constraints has long been identified in the creativity literature. In his 1975 book *The Courage to Create* Rollo May talked about advertisers appreciating the 'freedom of a tight brief' and the value of certain limitations, including the structures of form, for shaping and stimulating creative work. As he puts it, "Creativity arises out of the tension between spontaneity and limitations" (May 1975, p. 137). The lack of constraints or parameters often results in a lack of direction and even 'paralysis' for some people, especially when they don't have a solid discipline base to draw on as a safety net for creative explorations.

A consideration of these points in regards to a learning design process means finding ways to 'feed' student creativity through shaping experience, practice and investment through useful constraints. Understanding the 'rules' and forms of certain artforms or ways of creating, can provide the basis for creativity and innovation, both within a field and beyond, as rules may then be broken, remade and new ones imagined. However balancing the degree and nature of parameters, constraints and freedom is indeed a paradox (Beghetto 2016) and there are always questions about how much and to what degree rules and constraints can be used in productive ways pedagogically for cultivating creativity.

In seeking to further understand the ways constraints might be helpful, further insight may also be drawn from work by Bjork and Bjork (2011) on desirable difficulties. Constraints restrict the range of choices possible, and through creating a difficulty may challenge someone to draw upon

the accumulated history of their knowledge and experience and extend upon it to then overcome the difficulty. The gap created by the challenge of the task and constraints pushes us towards identifying what else we might need to learn or generate, and hence grappling with the difficulties may provide the impetus to be inventive (Bjork 2013).

Undesirable or problematic difficulties or constraints are those which are perceived as authoritarian and dogmatic and imposed externally. However, are all constraints that are externally imposed therefore undesirable or negative in their impact? It may be instructive to consider the idea of constraints in relation to thinking about extrinsic and intrinsic motivation. Discussions about motivation tend to draw upon early work by Amabile and colleagues which favour intrinsic motivation as most important for promoting creative activity. She argued that those who were intrinsically motivated were more likely to produce creative works than those motivated by external motivating factors (Amabile 1985). However, in some of her later work (1996), she argued that extrinsic motivators could also work in positive as well as negative ways. She identified that ‘controlling’ forms of extrinsic motivation such as surveillance, contracted-for-reward-tasks and competition can undermine the creative process. However, Collins and Amabile noted that some external motivating factors can be ‘positive’ if they are informational, recognise accomplishments and provide guidance about how to improve skills and competence (Collins and Amabile 1999). Constraints and assessment can likewise act as ‘external’ motivators and so it is worth considering the promotion of constraints that are informational, provide guidance and seek to improve skills may to potentially promote creativity.

To further consider ways to promote creativity within constraints, work by Schwartz, Bransford and Sears is also insightful with the concept of the ‘optimal adaptability corridor’ proving helpful. This is the corridor of activity where the challenge and degree of innovation required of a learning task is balanced against the ‘efficiency’ of learning (or learning based on the application of knowledge and skills already known). They suggest we need to aim for balancing efficiency and innovation in learning, to find the “optimal adaptability corridor” (OAC). They note that while people may expect you should develop efficiency first and then explore innovation, this may not necessarily lead to the best responses.

...“it appears that early innovation yields better adaptability in the short run and better efficiency in the long run in transfer situations” (Schwartz et al. 2005, p. 41). Being creative isn’t just what you tack on at the end once you’ve got your basic skills; it needs to be woven through the whole process and can stimulate learning.

Some consideration of literature about online learning was also canvassed as part of the design process. The research literature indicates that for many of the students who elect to study in the distance mode they are increasingly time poor (working part-time or even full-time, many with family responsibilities), and many won’t engage with learning activities, readings and content unless it is directly related to assessment (Harris et al. 2018). Furthermore when considering the type of activities students engage with and ways to support ‘active’ learning, the picture is not heartening. Research about online learning and assessment has suggested that activity tends to decrease as a course progresses: “the number of students who entered the video lectures decreased as the course progressed. Low activity was found in the discussion forums” (Soffer et al. 2016). This research aligns with findings from research I have conducted with previous Arts units that had been offered online. From that data and the evidence in the student work, a number of points were identified:

- Not many students attended the online sessions, and so while attempts had been made to demonstrate practical skills and engage in collaborative practice sessions online, the number of participants were limited;
- After the first three weeks, few students engaged with the weekly activities and went straight to assessment;
- If students had no or limited prior experienced in the arts the quality of the work was quite poor, and often based on what they could find through ‘googling’ arts lessons online;
- Some students who extended themselves were often parents who were engaging with discovering the arts through working (and playing) with their own children.

If students who learn through online mode are unlikely to remain actively engaged with activities and interactions online, including video materials (which might document practical workshop processes) or inter-

active forums, it was going to be a challenge to design a unit that sought to address the concerns raised in the arts education research. This research has found that many generalist primary teachers and ITE students have limited arts experience or confidence to teach the arts (Alter et al. 2009; Bamford 2006; Ewing and Gibson 2011; McArdle 2012). The issues and dilemmas that were drawn from this literature were grappled with to inform the design of the new unit. Key learnings from across this phase of inquiry were that the course and assessment should provide parameters and constraints to promote building specific domain knowledge and skills, through difficulties that could become desirable and activate external and internal motivation. The constraints and task parameters should also provide information and guidance, through activity that was not confined to online sessions, with built in adaptability and opportunities to innovate.

Ideate: Modeling the New Solution

In seeking inspiration to shape these ideas into possible learning experiences and a course design, I drew upon a number of sources but there were three in particular that were influential. Desiring to have my own experience of MOOCs, I had enrolled in Tina Seelig's 'Crash course in creativity'. Integral to that programme was the focus on practical creativity 'challenges', including both individual and groups activities. These included tasks such as creating a book cover about your creative life. A second influence emerged from a session at an Australian Associate for Research in Education conference where arts education academic Robin Pascoe shared details of their Murdoch University AIR (Artist in Residency) programme. For that programme they had invited artists to work with them to create two 'tasks' for each art form. While we would not have the artists to work with, from that model I found the idea of 'weekly' tasks for each art form useful, as well as the idea of drawing on the experience and work of professional 'artists'. Finally a third inspiration arose from a conversation with Rachel Forgasz prior to Anne Harris' first Creativity Symposium. Rachel told me about a dance project in Melbourne where families were set 'homework' tasks to complete themselves, that were then shared with the collective project. This concept was pertinent on two accounts. Given the experience shared by previous students regard-

ing their discovery of the arts through active engagement with their children, the idea of creative ‘homework’ tasks they could complete with family was a means of recognising and encouraging such experiences. The idea of them completing the work in their own space and time, but sharing it back provided them the chance to risk-take and experiment privately rather than online or publicly with their peers, but they would then have a collaborative forum for sharing their work when they were ready.

Modelling and Testing the New Model

Drawing upon key ideas from the literature as well as historical and empirical analysis, I began to design the unit and create a new model. My goal was to use certain ‘constraints’ and parameters that would require the students to engage in arts and technology learning and experiences through practical challenges they could complete in their own time and space. Therefore I designed a set of weekly ‘Arts and Technology Challenges’. I think the naming is important as it was issuing an offer, a dare, an open-ended request, a provocation and call to action.

Each challenge would be contextualised by the curriculum, and the related assessment tasks would also require students to plan how they might apply the resulting learning in the classroom. Each challenge would also be supported through online resources, with scaffolds and examples provided. The challenges had to be specific enough to provide the information and guidance to enable them to begin, but be open-ended enough to allow for creative explorations and outcomes.

To further counter the issue of (online) students mainly engaging with assessment related material, it was decided to make the completion of the challenges ‘mandatory’ as part of the assessment, as this would ensure students had to step outside of what they were comfortable with to explore new forms of activity and learning. The list of challenges and two assessment tasks that were then created were:

Challenge 1 – Visual Arts/Media – My creative life: Book cover and 6-word novel

Challenge 2 – Visual Arts – Same, same but different: Explore three ways

Challenge 3 – Media Arts – Digital storytelling

Challenge 4 – Drama – Drama, storydrama and pre-text

Challenge 5 – Music – The rhythm maker

Challenge 6 – Dance – Let's Dance: Folio and choreography

Challenges 7 and 8 (Design Technology) – Designing a product: And doing it ethically!

Challenge 9 (Digital Technology) – Representing data through infographics

Challenge 10 (Digital Technology) – Scratch it! A coding introduction

Assessment Task 1 – Arts Challenges & Digital Resource Package

Assessment Task 2 – Design and Digital Technologies Portfolio.

Implement: Testing and Implementing the Model (or Findings)

The model has so far been implemented through two iterations at the time of writing. The range of data available has been analysed to explore the impact of the design parameters upon student work, and what they reported they had learnt (or not). Rather than work through each of the CHAT elements one by one, the focus for this analysis is on what could be identified as the 'hot spots' of creative activity, the areas that appeared to cultivate student creative learning as well as those areas where contradictions and dilemmas arose.

Community and Roles

During the first year of implementation, of the 24 students, over half were regular attendees for online sessions. What was notable was that there was a core group of 4–5 who not only attended these sessions but also led the postings on the collective forum, with a particular focus on posting the outcomes of the weekly challenges and their reflections. The enthusiastic engagement by this group established a generally positive tone. Significantly this core group of 'opinion leaders' were not only engaging in the challenges for themselves but most were eagerly testing them out with their own children. What I was impressed by was the fact

they were developing domain specific knowledge and skills, but also beginning to move into a teaching or instructive role as they ‘instructed’ or worked with their children.

The challenges required them to engage in creative practice in their own space and this was probably a safer space than at university or in the classroom.

The children and I both had a lot of fun with the drama and the children were offering ideas on what else we could do every step of the way. I loved working with my children on this challenge; listening to their ideas and watching them interpret the pre text concept. They were so excited to be included in each element of this challenge and they both can’t wait to see what challenge 5 is all about!

One student, who did not have children, also explored this in-between creative learning space through co-opting her friends and colleagues while hosting a barbeque!

When starting this activity I struggled with having willing participants to assist. Luckily, I had friends that were scheduled to come over on the weekend for a barbeque. Funnily enough, everyone was very enthusiastic about having a go. It was a great experiment as the closest of my friends got to playing music that was on their radios.

What was impressive about this experience was the evidence that students were clearly learning and adapting discipline specific knowledge and skills:

Finally, I created some instruments using our barbeque utensils. Those with instruments were the base, then I created a melody using notes from the pentatonic scale (C D E G A) and attempting a go on the virtual piano app. Almost all combinations of notes sounded quite nice including the creation of chords.

These students were engaged in creative activities in low risk environments with family and friends, without the pressure of being assessed or judged straight away in the classroom. They were assembling temporary creative learning communities and through leading such, able to move

into a transitional role from personal to pedagogical practitioner. This appeared to perhaps be a more significant learning experience than those of on campus students in the past, where the students were positioned more as learners in our classrooms and later on as teachers while on practicum.

Tools, Rules and Mandates to Create

At the end of each term, students are invited to complete a unit evaluation for all courses with a set of core questions embedded in all units across the university. The two open-ended questions ask students to identify the best aspects of the course and those that could be improved. For the first year of implementation 16 out of the 24 students completed the evaluation and overall the course received a satisfaction rating of 4.5 out of a possible 5, which was a positive outcome.

The data was coded around the activity elements and a summary of such is presented in Table 15.1. What was clearly evident was that the ‘challenges’ had been the key tools for engaging students in ‘doing’ and ‘learning’ and many students identified that they had learnt a lot through completing them. However these same challenges were also identified by several students as overwhelming and even ‘ridiculous’. What was also apparent was that through creating rules to mandate these weekly learning experiences, a rule shift had occurred, with one student identifying how this was the first time they actually had to do the learning activities for a unit and they could not just skip to the assessment tasks.

For many students the challenges drew them into a challenging space but this was also a very creative space. There is no doubt they would *not* have gone there unless required to by the constraints and mandates of the assessment parameters:

At the start of the challenge I was extremely reluctant and I wasn't very excited at the idea of having to create a self-portrait, art has never been my strong point. (Blog post reflection)

(with the challenges) it was more time consuming than any other subject I have completed, but in the same breath I would not have learnt so much if the content was not there. I really enjoyed this subject. (Unit evaluation)

Table 15.1 Summary of unit evaluation 2017. N = 16

Activity elements identified positively	Activity elements identified negatively
Subject/individual – enjoyed the learning and ‘having a go’	Subject/individual
Tools/domain –	Tools/domain
The challenges (5)	Too many challenges, take too long
The assessment tasks (2)	
The information & resources (3)	
The detailed feedback (3)	
The lecturer knowledge, guidance (2)	
Community/field	Community/field
Working as part of a group (3)	Distance learning often isolating
Rules	Rules
Having to do the weekly challenges (2)	Doing the weekly challenges/activities very time consuming (10)
Having to work as part of a group (2)	
Roles	
Relevant to teaching role (4)	
Extended personally (1)	
Outcomes/products	
Learnt a lot (4)	
Personal confidence	
Resources for teaching	

For those who trusted and worked with the process the outcomes were very positive:

This challenge has forced me to participate and expose my limited artwork skills and at the same time it reminded me of how much I really enjoy trying new things. Although the activity was challenging I thoroughly enjoyed drawing and creating.

I have learnt a lot about various programs and applications and had immense fun in the process. Best of all I accomplished something in the art world which I was initially apprehensive about.

While the overall course evaluation was positive, in hoping to improve the experience for students even more, I took on board some of their concerns and advice and this included: highlighting in early communications to students the importance of beginning early and investing time in the challenges; drawing attention to the importance of the challenges as

learning activities and emphasising they are the basis of the assessment; reducing the requirement for all challenges to be completed and providing some choice in ones to complete; acknowledging the challenges as part of the assessment by identifying marks will be allocated to them on the criteria sheet/marks.

Reflecting on the Process

I could end the case at this stage and conclude with what appears to be a positive outcome to the design process. However in the second year of implementation the outcomes did not improve, in fact they declined!

Students were required to do fewer challenges and given choice. The challenges were also included on the task and criteria sheets and further clarification was provided around the task, the time investment and so forth. One might anticipate that this would result in better feedback from students and improved results, but that in fact was not the case. While achievement levels were still strong with all students who completed the course passing and 95% achieving a Credit or higher (see Table 15.2), the overall satisfaction level for the course dropped from 4.5/5 to 3.7/5. This was perceived by the university as quite low and received a 'yellow' flag. Receiving a yellow flag means the unit coordinator has to provide an account of what strategies will be undertaken to ensure student satisfaction levels improve in the following year.

What was apparent throughout this second year of unit evaluations was further validation of the core contradiction presented by the challenges. Students being mandated to complete the challenges stimulated

Table 15.2 Student achievement results 2016 and 2017

Grade	Per cent 2016	Per cent 2017
High distinction	30	25
Distinction	38	25
Credit	28	45
Pass	4	4
Fail	0	0
Total:	100	99

their creativity and learning, but in quite a few cases the learning was reported as being 'difficult' or uncomfortable. Whilst these students were less than appreciative of such experiences, some students believed the challenges extended them and actually helped them learn,:

Taking people out of their comfort zone can result in resistance (and there was a lot), but there is a true satisfaction in completing a challenge about which a person has little experience. (Student course evaluation 2017)

I thought they were unrealistic but after having practical experience in the classroom I see how the course relates better. (Student course evaluation 2017)

The dilemma is clearly articulated in that the rules and constraints of mandated practical tasks were what focused student attention and time where it would not have been otherwise, the mandates pushed and extended the students to combine and create, and hence to learn:

... but once I accepted that it had to be done I really enjoyed it. I was able to relieve a lot of stress doing the practical implications and learnt more about how I think and strategize.

What was significant and different about the second cohort though, was evident in early online postings and the tone of such by 'opinion leaders'. In 2016, early postings were very focussed on students sharing the first challenge, the process and their personal learning. However in 2017 an opinion leader emerged who was more concerned with the assessment parameters, rules and getting everything 'right'. See below for sample postings from two of the more prolific posters and 'opinion leaders' from 2016 compared to that from 2017:

Examples from 2016:

I was not confident enough to draw a pencil-portrait, but I felt much more comfortable to draw Picasso-style. I believe that there would be many students who feel the same way as me.

My six word story is about 'when I was very young, I enjoyed creative stuff. As I became older, I lost enjoyment and creativity' but now I am rediscovering it. (Forum post 14 March, 2016)

Examples from 2017:

How many words should we aim to write for the reflection for each blog post/challenge? I thought I saw it somewhere but can't seem to locate it. (Forum post 12 March 2017)

Perhaps you missed my earlier post. How many words should we aim to write for the reflection for each blog post/challenge? (Forum post 13 March 2017)

I was looking at the section of the criteria sheet for the challenges and wondered if you could give some more information as to what the challenges will be marked on and what makes for an excellent standard of work. (Forum post, 16 March 2017)

These experiences highlighted the importance of the relational roles and those intangible aspects of group culture and perspectives. The first student group of opinion leaders had embraced their roles as learners and creatives and while somewhat hesitant and uncomfortable, invested in the process and were mostly positive about what they had learnt about the arts, technologies and creativities. The second opinion leader was much more invested in her role as a good 'student' and hesitant to explore or create unless she could be assured she would get everything 'right'. She was a high achiever who it can be argued saw the challenges and assessment as transactional activities that had to be 'correctly' completed to enable her to complete the course, and hence be rewarded through a job and professional accreditation. In other interactions and the work created it seemed she was more reluctant to embrace the uncertainty of the creative processes and the flexibility possible within the given constraints.

Concluding Reflections and the New Practice

In reviewing the overarching unit design challenge that was set and the learnings that have arisen in regards to creative learning, there are some key findings that have emerged, but also dilemmas that remain. In learning contexts where formal assessment is the outcome, constraints and

mandates are a reality and always have to be considered. Creative learning therefore can be both enabled but also mandated through the design of productive and flexible constraints. Developing student creativity and capacity in any area where students have limited prior experience will take time, effort and commitment. In this case study the design of the weekly 'challenges' and assessment tasks sought to create rules and constraints that could be seen as instructional and directional, hoping students would see the tasks as creating desirable difficulties, that could be overcome and lead to highly productive and creative learning.

A key contradiction that arose was that this investment in learning through mandated 'doing' did result in significant learning that many students valued. The investment in time was however more than some students expected or desired, and they resisted being 'pushed' into this creative learning space. Some students identified that the constraints they resisted initially were the very things that required them to risk-take and create. They did extend their creativity but they would not have made that investment without the 'rule' or constraints to motivate them. The dilemma for myself as an educator however is around whether I believe that the learning that was stimulated for 'most' students justifies the risk of invoking lower student satisfaction ratings. This brings with it reputational risks in the current context of university rankings and reporting, with the push to achieve ever higher feedback evaluation scores from student.

What was heartening and a key finding was that those students who did embrace the challenges and activate creative learning communities of their own, expanded their own creative capacity, but also that of their children and friends. They entered into a transitional space as creative pedagogues, building their confidence in leading and creating with others. Creative learning for many was transformative, but was also difficult, and at times uncomfortable. The case has affirmed however, that creative learning involves the novel, the new and emerging, it involves trying things you have not done before, embracing new knowledge, skills, combinations and applications, and for those who invest in the process, it can be testing and uncomfortable, but the rewards are multi-dimensional. The findings of this research confirm that creativity can be stimulated through the use of productive constraints, translating across personal and

professional contexts to impact on the learning of not only our future teachers, but also on to the students they may inspire. However, the design and enactment of assessment mandates and constraints for cultivating creativity is by no means unproblematic!

References

- Alter, F., Hays, T., & O'Hara, R. (2009). The Challenges of Implementing Primary Arts Education: What Our Teachers Say. *Australasian Journal of Early Childhood*, 34(4), 22–30.
- Amabile, T. M. (1985). Motivation and Creativity: Effects of Motivational Orientation on Creative Writers. *Journal of Personality and Social Psychology*, 48(2), 393–399.
- Amabile, T. M. (1996). *Creativity in Context: Update to the Social Psychology of Creativity*. Boulder: Westview Press.
- Asia Pacific Design Library. (2014). *Getting Started with Design Thinking*. Brisbane: State Library of Queensland.
- Baker, W. J., Hunter, M.-A., & Thomas, S. (2016). Arts Education Academics' Perceptions of eLearning & Teaching in Australian Early Childhood and Primary ITE Degrees. *Australian Journal of Teacher Education*, 41(11), 31–43.
- Bamford, A. (2006). *The Wow Factor: Global Research Compendium on the Impact of the Arts in Education*. New York/Munich/Berlin: Waxmann Munster.
- Beghetto, R. A. (2016). Creativity and Conformity: A Paradoxical Relationship. In J. A. Plucker (Ed.), *Creativity and Innovation: Current Understandings and Debates*. Waco: Prufrock.
- Bjork, R. A. (2013). Desirable Difficulties Perspective on Learning. In H. Pashler (Ed.), *Encyclopedia of the Mind*. Thousand Oaks: Sage Reference.
- Bjork, E. L., & Bjork, R. A. (2011). Making Things Hard on Yourself, but in a Good Way: Creating Desirable Difficulties to Enhance Learning. In M. A. Gernsbacher, R. W. Pew, L. M. Hough, & J. R. Pomerantz (Eds.), *Psychology and the Real World: Essays Illustrating Fundamental Contributions to Society* (pp. 56–64). New York: Worth Publishers.
- Collins, M. A., & Amabile, T. M. (1999). Motivation and Creativity. In R. J. Sternberg (Ed.), *Handbook of Creativity* (pp. 297–312). Cambridge: Cambridge University Press.
- Craft, A. (2001). Little c Creativity. In A. Craft, B. Jeffrey, & M. Leibling (Eds.), *Creativity in Education* (pp. 45–61). London: Continuum.

- Csikszentmihalyi, M. (1994). The Domain of Creativity. In D. H. Feldman, M. Csikszentmihalyi, & H. Gardner (Eds.), *Changing the World: A Framework for the Study of Creativity*. Westport: Praeger.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. New York: Harper Perennial.
- Csikszentmihalyi, M. (1999). Implications of a Systems Perspective for the Study of Creativity. In R. J. Sternberg (Ed.), *Handbook of Creativity* (pp. 313–335). Cambridge: Cambridge University Press.
- Davis, S. (2012). Developing Confidence and Creative Capacity: The Arts Learning Journey for Primary and Early Childhood Pre-service Students. In *AARE, Refereed Conference Paper, Sydney*.
- Engeström, Y. (1987). Learning by Expanding: An Activity-Theoretical Approach to Developmental Research. Retrieved from <http://lchc.ucsd.edu/mca/Paper/Engestrom/expanding/toc.htm>
- Engeström, Y. (2009). Expansive Learning: Toward an Activity-Theoretical Reconceptualization. In K. Illeris (Ed.), *Contemporary Theories of Learning*. Abingdon/New York: Routledge.
- Engeström, Y., & Sannino, A. (2010). Studies of Expansive Learning: Foundations, Findings and Future Challenges. *Educational Research Review*, 5, 1–24. <https://doi.org/10.1016/j.edurev.2009.12.002>.
- Ewing, R., & Gibson, R. (2011). *Transforming the Curriculum Through the Arts*. Melbourne: Palgrave Macmillan.
- Feldman, D. H., Csikszentmihalyi, M., & Gardner, H. (1994). *Changing the World: A Framework for the Study of Creativity*. Westport: Praeger.
- Gardner, H. (1993). *Creating Minds: An Anatomy of Creativity*. New York: Basic Books.
- Glaveanu, V., Lubart, T., Bonnardel, N., Botella, M., de Biais, P.-M., Desaint-Catherine, M., ... Zenasni, F. (2013). Creativity as Action: Findings from Five Creative Domains. *Frontiers in Psychology*, 4, 176. <https://doi.org/10.3389/fpsyg.2013.00176>.
- Harris, A. (2016). *Creativity and Education*. London: Palgrave Macmillan.
- Harris, L. R., Brown, G. T. L., & Dargursh, J. (2018). Not Playing the Game: Student Assessment Resistance as a Form of Agency. *The Australian Educational Researcher*, 45(1), 125–140.
- IDEO. (2011). Design Thinking for Educators. Retrieved from <https://design-thinkingforeducators.com>

- Kaufman, J. C., & Beghetto, R. A. (2009). Beyond Big and Little: The Four C Model of Creativity. *Review of General Psychology, 13*(1), 1–12. <https://doi.org/10.1037/a0013688>.
- Lierse, S. (2015). Developing Fully Online Pre-service Music and Arts Education Courses. *Victorian Journal of Music Education, 1*(15), 29–34.
- May, R. (1975). *The Courage to Create*. New York: Bantam. Available from http://moe.machighway.com/~cliffor1/Site/EXSupplementalReadings_files/23692564-ROLLO-MAY-Tthe-Courage-to-Create.pdf
- McArdle, F. (2012). New Maps of Learning for Quality Art Education: What Pre-service Teachers Should Learn and Be Able to Do. *The Australian Educational Researcher, 39*(1), 91–106. <https://doi.org/10.1007/s13384-012-0051-2>.
- Noddings, N. (2013). Standardized Curriculum and Loss of Creativity. *Theory into Practice, 52*, 210–215. <https://doi.org/10.1080/00405841.2013.804315>.
- Sawyer, R. K. (2006). *Explaining Creativity: The Science of Human Innovation*. Oxford/New York: Oxford University Press.
- Schwartz, D. L., Bransford, J. D., & Sears, D. (2005). Efficiency and Innovation in Transfer. In J. Mestre (Ed.), *Transfer of Learning from a Modern Multidisciplinary Perspective* (pp. 1–51). Greenwich: Information Age Publishing.
- Soffer, T., Kahan, T., & Livne, E. (2016). E-assessment of Online Academic Courses via Students' Activities and Perceptions. *Studies in Educational Evaluation, 54*, 83–93.
- Vygotsky, L. S. (1930/2004). Imagination and Creativity in Childhood. *Journal of Russian and East European Psychology, 42*(1), 7–97.
- Vygotsky, L. S. (1933/1966). Play and Its Role in the Mental Development of the Child. *Voprosy Psikhologii, 6*. Retrieved from <https://www.marxists.org/archive/vygotsky/works/1933/play.htm>
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.



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Propositions for Creativity Policy, Partnerships and Practice in Educational Creative Futures

Kim Snepvangers, Anne Harris, and Pat Thomson

Creative Presents

This is the first volume to take a broad approach to the gaps in creativity education across the education lifespan, with its implications for creative education policy, creative partnerships, and its practice and assessment in schools and higher education. Drawing from latest research across the UK and Australia, these diverse chapters have explored innovations in

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interdisciplinary creativities including STE(A)M agendas and definitions, science and creativity, organisational creativity, national overviews of arts and creative partnerships, creative pedagogies, assessment, cognition, teacher education, embodied aesthetics and more. This book also extends contemporary creativity and culture scholarship by incorporating recent creative industries/cultural industries debate at both national policy and curricular levels. The contributors and editors of the book have argued that good creative educational practice and policy advancement does not require reinventing the wheel. It needs to be individual, not standardised; it is risky, not risk-averse.

Unfortunately, where primary schools continue to make environments conducive to this kind of ‘slow education’, secondary schools, higher education, and education policy too often do not. This book argues from diverse viewpoints and methodological perspectives that 21st century creativity education must find a way to advance in a more integrated, and less-siloed manner in order to respond to pedagogical innovation, economic imperatives, and creative possibilities. The creativity education and industry lifespan must be approached in a more integrated, ecological manner in order to adequately prepare students for creative practice, workplaces and publics.

Creative Futures

This book has evolved strongly towards a ‘creative ecologies’ direction in thinking about creative educational futures. In taking an ecological viewpoint from an economic perspective, the work of John Howkins (2009) offers a forward feeding set of challenges when looking at innovation culture and creative economies. He is critical of “repetitive economies” where creativity is seen as a kind of specialist function (Howkins 2009, p. 10) arguing that instead of being focused on “one-off innovation implemented in mass production with ever lower costs and prices ... we are now seeing a shift to the creative economy” (ibid). Extending his business heuristic, he notes a movement towards seeing growth in terms of the “added symbolic value” and specifically how “inputs and outputs of a creative economy are subjective and qualitative” (p. 11). Howkins

celebrates the significance of instabilities by valuing creative ecologies. He defines ecology as

the study of relationships between organisms and their environment, which probably includes other organisms. An *eco-system* is an ecology of several different species living together. Scientists talk of *habitats*, which are real places ... and also of *niches*, which are systems wherein a species thrives. (Howkins 2009, p. 11)

Creativity scholars, especially working in and around education, are increasingly turning to the ecological or *ecosystem* view which foregrounds a consideration of the interdependency of all actants in the system. Even though Howkins is writing from a creative thinking, enterprise and innovation perspective, these alternative spaces of possibility (niches, habitats, ecosystems and ecology) are useful terms for taking these ideas further into creativity ecologies, by setting out how:

A creative ecology is a niche where diverse individuals express themselves in a systematic and adaptive way, using ideas to produce new ideas: and where others support this endeavour even if they don't understand it. These energy-expressive relationships are found in both physical places and intangible communities; it is the relationships and action that count, not the infrastructure. The strength of a creative ecology can be measured by these flows of energy and the continual learning and creation of meaning. The quartet of diversity, change, learning and adaptation. (Howkins 2009, pp. 11–12)

Howkins' notions of energy-expression, flows, continual learning and the primacy of relationships anticipate many of the theoretical and empirical contributions in this book.

A core part of creative and educational ecologies is of course relationships, and the primacy of relationships is explored in Arnold and Ryan's (2003) work on transformative experience.

This volume reflects the richness of creative transformative experiences, especially those "which occur with sufficient emotional intensity to be meaningful, and with sufficient cognitive patterning to organize thinking and learning in deeply significant ways" (2003, p. 5). Arnold and

Ryan suggest a four-factor understanding of meaningfulness through intensity, one which we believe bears relevance for future-thinking in creative education. They include:

1. Quality of engagement with knowledge;
2. The deepening of teachers' functions, especially as learning mentors;
3. Enhanced capacity for imagination, innovation and creativity;
4. The primacy of relationships as part of the transformative capacity of new learning. (Arnold and Ryan 2003, p. 5)

Arnold and Ryan's four factors are evident in many of the chapters in this book, and—together with a discussion of the significance of indeterminacy (Hopwood 2016)—are useful in examining aspects of creative policy, partnerships and practice that we feel are increasingly salient to a future vision of education overall. These concepts, alongside Howkins' understanding of how "meanings are unstable" (Howkins 2009, p. 11), inform much of the work in this book, evident in the authors' applications of creativity as a lens through which to examine the significance of stability, change and indeterminacy in educational practice.

While ecologies, relationships and transformative learning are acknowledged as key to stable, unstable and dynamic practices and infrastructures overall, they are particularly significant in educational contexts. Histories and practices of creative partnership continue to present policy opportunities and challenges globally, given that budgeting, timetabling, curricular demands and large classes within compulsory and non-compulsory schooling are a continuing constraint. The role of partnerships with outside individuals or organisations is both integral to creative education and also a site of precarity for its implementation.

Creative agency remains the goal for the contributors in this volume and our colleagues and students, but rapidly changing educational landscapes present ongoing challenges. Although keen to establish the value and significance of human agency in educational contexts, Hopwood (2016) provides further evidence of the need to move beyond individuality and fixity in general, towards contingency as a productive orientation as well as a fundable outcome of creativity research. Citing Schatzki's

2002 framework, Hopwood argues that, “Agency is relational, arising through, or as an effect of, bundles of practices and material arrangements at particular sites” (2016, p. 72). Precarious and contingent “people, organisms, things, and artefacts” (p. 72) are significant in education conceived as an environment with capacity (and indeed need) for constant change. Hopwood is interested in ‘prefiguring’ as a way to make “courses of action more or less difficult, threatening, distinct” (2016, p. 73), and brings together the concepts of indeterminacy and agency alongside temporal considerations to argue that “nothing determines what a person does before the act is done ... whatever causes or leads to that action is not fixed until the moment of its performance” (Hopwood 2016, p. 73). The authors and co-editors have strived to portray such transdisciplinary complexity, to shift the locutionary focus of individualised creativity talk, beyond dialogue towards creative agency, Harris (2014, 2016, 2017), creative partnerships, Thomson et al. (2009, 2010, 2012) and ecologies of practice, Snepvangers & Mathewson-Mitchell (2018).

Conclusion

And so, following Hopwood, we understand these chapters as signposts along a road into our shared creative futures, emerging out of creative practice and moving towards more integrated ecologies of creative imagination, care and adaptability, unfolding in formal education and beyond into public pedagogical events and assemblages. In engaging with the creative possibilities for change evidenced in this book, we hope you will approach the multiple and challenging needs as we have: inter- and trans-disciplinarily, ecologically, and with a view not only to building creative 21st century workforces, but better 21st century communities and relationships—between humans, more-than-humans, and embodied in all our practices as creative beings.

References

- Arnold, R., & Ryan, M. (2003). *The Transformative Capacity of New Learning*. Bundoora: Australian Council of Deans of Education (ACDE).

- Harris, A. (2014). *The Creative Turn: Toward a New Aesthetic Imaginary*. Rotterdam: Sense Publishers.
- Harris, A. (2016). *Creativity and Education*. London: Palgrave Macmillan.
- Harris, A. (2017). Creative Ecologies: Fostering Creativity in Secondary Schools Final Report. Retrieved from: <https://www.creativeresearchhub.com>, <https://www.creativeresearchhub.com/creative-education>. Accessed 4 Apr 2018.
- Hopwood, N. (2016). *Professional Practice and Learning: Times, Spaces, Bodies, Things*. Heidelberg: Springer.
- Howkins, J. (2009). *Creative Ecologies Where Thinking Is a Proper Job*. St Lucia: The University of Queensland Press, Brisbane.
- Snepvangers, K., & Mathewson-Mitchell, D. (2018). Transforming Dialogues Through Ecologies of Practice in Art, Education and the Cultural Sphere. Chapter One in K. Snepvangers & D. Mathewson-Mitchell (Eds.), *Beyond Community Engagement: Transforming Dialogues in Art, Education and the Cultural Sphere* (pp. 1–22). Champaign: Common Ground Publishing; University of Illinois.
- Thomson, P., Jones, K., & Hall, C. (2009). *Creative School Change*. Newcastle: Creativity, Culture and Education.
- Thomson, P., Hall, C., Thomas, D., Jones, K., & Franks, A. (2010). *A Study of the Learning Performance Network, an Education Programme of the Royal Shakespeare Company*. Newcastle: Creativity, Culture and Education.
- Thomson, P., Hall, C., Jones, K., & Sefton-Green, J. (2012). *The Signature Pedagogies Project: Final Report*. Newcastle: Creativity, Culture and Education.

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