scope
Contemporary Research Topics

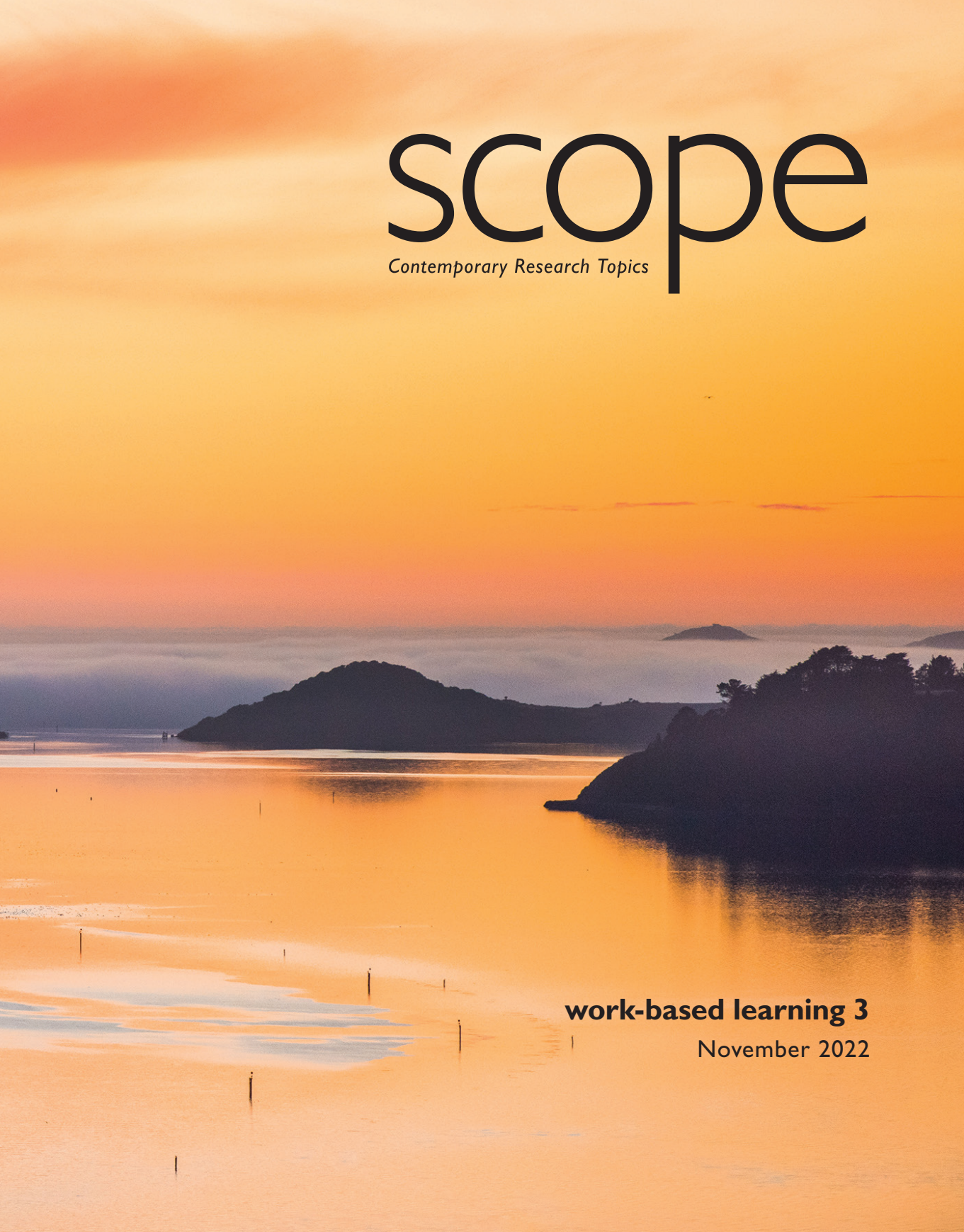
work-based learning 3:

November 2022

https://doi.org/10.34074/scop.6003

Published by Otago Polytechnic Press. Otago Polytechnic Ltd is a subsidiary of
Te Pūkenga – New Zealand Institute of Skills and Technology.

© 2022 the authors; © illustrations, the artists or other copyright owners.



scope

Contemporary Research Topics

work-based learning 3

November 2022

scope

Contemporary Research Topics

work-based learning 3:

November 2022

Scope: Contemporary Research Topics (Work-based Learning) is peer-reviewed and published annually by ***Scope: Contemporary Research Topics***, Otago Polytechnic Press. Otago Polytechnic Ltd is a subsidiary of Te Pūkenga – New Zealand Institute of Skills and Technology.

Scope: Contemporary Research Topics (Work-based Learning) focuses on contemporary research in assessment of prior learning; learning in, for, and about work, and professional practice. It is concerned with critical debate about practice, theory, and history, and their relationships as manifested in the experiences of learners, practitioners, and researchers in work-based learning and professional practice.

An online version of the journal is available free at https://thescopes.org/journal/
ISSN (for hardcopy version): 2703-6227; ISSN (for online version): 2703-6235.

Submissions for *Scope (Work-based Learning) 5* are invited under the theme of 'the learner.' We invite papers, reports, reflections, artefacts, and other forms of research that put the learner first. We seek papers by learners, with learners and for learners. This issue considers studies of learner experience, learner research and learner-centred teaching and learning. *Scope (Work-based Learning) 5* encourages learners to contribute solo pieces, or to sign up their mentors for a collaboration – with the mentor as your support act. We also encourage facilitators and mentors to rally their learners to contribute to the journal.

© 2022 the authors; © illustrations, the artists or other copyright owners.

Copy Editing: Ingrid Sage

Design & Typesetting: Suzanne Thornton

Printing: Dunedin Print Ltd.

Cover: Pieter du Plessis, *Otago Harbour Sunrise*

Series Editor: Professor Leoni Schmidt https://orcid.org/0000-0001-7185-7800

Editorial Team: Dr Martin Benedict Andrew (Editor), Dr Jan Hendrik Roodt (Editor), and Megan Kitching (Editorial Liaison).

For peer review and editorial advice and comment, the editors rely on a range of appropriate reviewers, but in the first instance on members of the Editorial Board:

- Dr Nell Buissink, Auckland University of Technology
- Prof Carol Costley, Middlesex University London
- Dr Stanley Frielick, Auckland University of Technology
- Dr Phil Ker, Tertiary Education Consultant

GUIDELINES FOR CONTRIBUTORS

Submissions for *Scope (Work-based Learning)* should be sent by 30 April for review and potential inclusion in the annual issue to: Dr Jan Hendrik Roodt (Chief Editor: henk.roodt@op.ac.nz).

Please consult the information for contributors below and hardcopy or online versions for examples.

All submissions will be peer reviewed. Peer review comments will be sent to all submitters in due course, with details concerning the possible reworking of documents where relevant. All final decisions concerning publication of submissions will reside with the Editors. Opinions published are those of the authors and not necessarily subscribed to by the Editors or Otago Polytechnic.

Contributors retain copyright in their submissions and must obtain permission for the use of any material that is not their own included in their submission. Contributors grant the publishers permission to deposit the published work in our institutional repository.

Except for images, mātauranga Māori, and where otherwise indicated, content will be made available as open access on a Creative Commons Attribution license 4.0.

All images are copyright to the respective artists and photographers.

Mātauranga Māori is a significant component of Aotearoa/New Zealand's heritage, and sharing mātauranga Māori facilitates inter-cultural dialogue and understanding that is in the national interest. However, we recognize that the originating Māori community and/or individual has the primary interest as kaitiaki over the mātauranga and we are therefore committed to ensuring that the sharing, promotion and innovation based on mātauranga Māori respects and enhances its cultural and spiritual integrity, as well as that of the originating community and/or individual.

Formats include: editorials, articles, perspectives, essays, research notes and work in progress. Other formats will also be considered.

High standards of writing, proofreading and adherence to consistency through the APA referencing style are expected. For more information, please refer to the APA Publication Manual, 7th edition; and consult prior issues for examples. A short biography of no more than 50 words; as well as title; details concerning institutional position and affiliation (where relevant); contact information (postal, email and telephone number) and ORCID number should be provided on a cover sheet, with all such information withheld from the body of the submission. Low resolution images with full captions should be inserted into texts to indicate where they would be preferred, while high resolution images should be sent separately. Enquiries about future submissions can be directed to henk.roodt@op.ac.nz.

scope

Contemporary Research Topics

CONTENTS

6	Jan Hendrik Roodt	Working Around and Work-Arounds in Complex Times
8	Martin Andrew	'Covid Made Me Do It': Narratives of Pivoting in Research
19	Martin Andrew, Anne Alkema, Sandy Geyer, Claire Goode, Steve Henry, Vicki Rangitautehanga Murray, Robert Nelson, Bonnie Robinson and Jeremy Taylor	Horns of Dilemmas: Doctoral Learners Share Their Work-Arounds
30	Steve Henry, Ana Rangi, Deane Patterson, Karen Hocking, Rebbecca Page and Steve Jennings	Reflections on the Value of a Learner Forum in a Master of Professional Practice Programme
36	Samuel Mann and Margy-Jean Malcolm	Principles for Educational Innovation – A Developmental Evaluation Perspective
51	Margy-Jean Malcolm, Samuel Mann and Deane Patterson	Building a Culture of Everyday Inquiry, Learning and Adaptation
59	Jan Hendrik Roodt, Steve Henry, Thomas Iskov, Lis Montes de Oca, Ginger Grant and Anju Kakkar	Learner Agency: Exploring Perspectives from New Zealand, Denmark and Canada

69	Sandy Geyer	The Phenomenon of the Working Around Entrepreneur Through COVID-19 in New Zealand and South Africa
78	Leigh Quadling Miernik	Starting the Doctorate: Learnings From the Journey so Far
84	Ray O'Brien	Antifragile Learning: Black Swans to Green Swans
95	Martin Andrew and Mawera Karetai	Bricolage as a Method in Professional Practice
104	James Harrison and Martin Andrew	Capability and the Professional Practice Mentor
113	Christiaan Bredenkamp, Shehan Anjana, Dani Mao and Marianne Cherrington	Engagement and Impact of Green Office Toitū

doi.org/10.34074/scop.6003015

WORKING AROUND AND WORK-AROUNDS IN COMPLEX TIMES

Jan Hendrik Roodt

Ehara taku toa takitahi engari; he toa takitini
My successes are not mine alone; they are ours
– Whakataukī

2020. A new, and on first accounts, deadly virus starts to spread globally. In the chaos that ensues, the cracks in socio-industrial systems, such as health systems, suddenly become obvious. Old information technology systems, that have been kept barely operational for years, suddenly see massive use and start to fail. Within their own physiological systems, people break down, mentally and physically.

Night falls metaphorically on international and national enterprise; harbours suddenly are brought to a standstill and aviation grinds to a halt. Supply chains break down. The race for a vaccine occupies Earth, and, as the world waits, we are forced into seclusion.

We meet online in small groups. Greetings change from "Kia ora, how are you?" to "Can you hear me?" We joke it is like a seance: "Is anybody there?" The most commonly uttered words are now: "You're on mute"; *"Kei te wahangū koe."* Somehow, many of us keep working and some switch to new work, while others appear to wait through the long, dark days of empty streets, standing in line to grab rationed everyday products off bare shelves.

Over time, new coping strategies emerge. Many of us discover how to be frugal with our resources and our words. We have time to contemplate; a deliberate slowness has been forced on many, while others race on to keep technology systems going and most importantly to save lives.

As we considered the topic for *Scope (Work-based Learning) 3*, we were compelled to capture the work that emerged from the dark night of the pandemic. How did we work around the problems we faced while we huddled around computer screens, with our make-shift home offices bathed in the blue light of fuzzy if bespoke backdrops? How did we manage long research journeys while our opportunities for face-to-face kōrero (discussion) with research participants dwindled and opportunities for 'snowball'-type sampling faded? How did our resilience express itself while the world hibernated and fretted? Just as sunrise follows night, we also found work-arounds in our work practices. We had to find innovative ways of developing and sharing our work, developing new networks and strengthening existing ones. In a temporary sense, we found our pivots, like a needle orienting to magnetic north. In some cases, innovative work continued and the focus shifted to learning experiences.

Our cover depicts a calm Otago harbour at dawn. The light of a new day is starting to break through. The selected articles in this edition confirm that work has continued in many ways and in many places. New endeavours rose like the morning sun, and others were brought to fruition. This edition of *Scope (Work-based Learning)* shows how we kept going and, as you read the different pieces, you may be surprised at what was accomplished despite social and physical distancing. To paraphrase the title of the article from Martin Andrew, we narrate what COVID-19 made us do, and share stories of resilience, adaptation, and working around.

Those in the roles of mentors and facilitators often played an increasingly prominent role in bringing together the different contributions, as you will see from the table of contents. The mentor and facilitator often had prior experience of volatile and uncertain situations and could navigate by the stars of that experience. Discovering new emergent methods and allowing change itself to constitute learning became pedagogical focus points for many in the worlds of vocational and higher education. We celebrated Matariki as a nation for the first time on 24 June 2022, guided by the Pleiades star cluster. The world was starting to turn, and the more optimistic among us caught promising glimpses of the tunnel's end; or rather, of a landscape inexorably changed forever. Simultaneously came the emergence of Te Pūkenga, either a macro-community to nourish us all, or a taniwha, to use a metaphor used by one author in the article "Horns of Dilemmas," waiting to swallow us all up. Noticeably, we reached out across seas for collaborations, and our researcher life became one characterised by bridges, ultimately linking us all in our work-based endeavours. And so, rather than discuss each research contribution in this volume one by one, as editorials generally do, we ask that you keep turning the pages, discover the different work-based stories and find inspiration for the work that awaits us now.

2023. With the new day comes a new theme, aware of the new and continued learning that is taking place. *Scope (Work-based Learning) 5* focuses the promising light of the new day on the work-based learner and their professional practice journeys. We encourage learners to contribute solo pieces, or to join with their mentors and facilitators for a collaboration. *Ehara taku toa takitahi engari; he toa takitini.*

Jan Hendrik Roodt (linkedin.com/in/drjanroodt) is a transdisciplinarian working in strategic management and process modelling in industry, and an advanced learning facilitator for postgraduate students in professional practice and innovation at Te Pūkenga, New Zealand. Memberships include the IEEE Systems Council, International Council on Systems Engineering, and IT Professionals New Zealand.

https://orcid.org/0000-0001-5250-8066

doi.org/10.34074/scop.6003014

'COVID MADE ME DO IT': NARRATIVES OF PIVOTING IN RESEARCH

Martin Andrew

INTRODUCTION

This paper is based on an invited address at the 2nd International Conference on Advanced Multidisciplinary Research (ICAMR) organised by the Research and Community Service Institute of Universitas Negeri, Makassar, Indonesia, in late 2020. It speaks to the theme, "Utilizing research findings to create sustainable solutions for human welfare." The study is part of a broader, ethics-approved phenomenological study of the lived experiences of graduate students in the doctoral spaces of work-based learning (WBL) or professional practice in an age characterised not only by resilience in the face of pandemic, but also by the post-truth fearmongering impacting people's consciousness. While the affordances of technology have created multiple narratives of triumph over lockdown in education in a major information dump of fast studies, neither the pedagogical and critical theories behind those affordances nor the experiences of postgraduate learners managing long-term projects has received due scrutiny. Drawing on a small part of an emerging dataset, this study outlines the broader context of crisis age technology-led learning, suggests pedagogical factors behind the perception of short-term resilience, and presents cases of 'pivoting' in postgraduate work in complex times. The study is predicated on and concludes that four themes have capacity in driving the endurance of such work: community, transdisciplinarity, emergence and sustainability.

NARRATIVE 1: A TALE OF SUPERCOMPLEXITY AND POSTGRADUATE LEARNING

In a recent *Inside Higher Ed* (Jaschik, 2021), we read that the University of Minnesota, Twin Cities, has ceased enrolling doctoral learners owing to the pandemic. When it comes to responses to the COVID-19 crisis, stopping entry to long-term programmes might appear reasonable. Although successful candidatures bring prestige and often government funding, they also pose risks owing to their duration of 2.5 years at an absolute minimum. Risk managers perceive such durations as problematic in an era of such an uncertain future that what happens as soon as tomorrow could change everything.

For enrolled doctoral learners, and this study operates in the doctoral spaces of work-based learning (WBL) or professional practice as is appropriate for *Scope*'s 2022 theme, COVID-19 has afforded an opportunity to create what Barnett had in 2004 called "authentic being" (p. 259) in a study of learning for an unknown future. Such moments as these remind us that engaged real-world responsiveness in education has the capacity to create "a self that is adequate to such an uncertain world" (p. 254). This is achieved through "encountering strangeness ... wrestling with it and ... forming one's own responses to it" (Barnett, p. 257). Making sense of mayhem, Barnett argued in 2000, remained a constant function of higher education, even in the 'supercomplex' age where knowledge lacks status and legitimacy in an era hijacked by rampant neoliberalised forms of entrepreneurialism. Bengtson (2017) demonstrated how prescient Barnett's notions have been, and 2020 onwards has offered us the opportunity to put them to the test.

Twenty plus years on, in order to survive 2020, 2021, 2022 and beyond, universities internationally need to promote epistemologies that are, in Barnett's (2000) terms, "open, bold, engaging, accessible," and, above all, "conscious of their own insecurity" (p. 409). This requires the use of underpinning pedagogies and "ways of understanding" (p. 416) that afford these qualities of the construct, 'supercomplexity.' My study examines some aspects of "ways of understanding" that afford postgraduate learning for a supercomplex world. These ways can be understood as functions of at least four key themes: community, transdisciplinarity, emergence and with them, sustainability.

The Minnesota example is, of course, just the tip of the iceberg when it comes to institutional responses internationally and a conveniently current launchpad for this enquiry into how currently enrolled doctoral learners are travelling. Ceasing enrolments, though, speaks to the increasingly fractured nature of the neoliberalised higher education provider and points to an ideology where entrepreneurialism and human welfare come from oppositional understandings of the purpose of higher, particularly postgraduate, learning. If COVID-19 has been successful in any particular way, it has been in its ability to deconstruct the false epistemology of the neoliberalised (or 'managed' or 'audit culture') tertiary institution. We should not be simply generating conveyor-belt entrepreneurs, but researchers who are resilient rather than resiling, pivoting rather than panicking, and embracing the affordances of communities of practice, the necessity for education to be sustainable, the potential of transdisciplinarity (itself a subset, perhaps, of multidisciplinarity) and the value of methodologies that are emergent rather than prescribed.

NARRATIVE 2: A STORY OF COVID-19, TECHNOLOGY AND PEDAGOGY

One of the dominant micronarratives of education in the age of COVID-19 was the Zoom boom. Zoom entrepreneur Eric Yuan emerged from a lacklustre videoconferencing suite run by Cisco Systems to create and adjust Zoom Video Communications in a classic case of 'right time, right place' just prior to the shift from face-to-face (F2F) working and learning to online. Fifteen billion dollars later, Yuan has left the world without doubt that Zoom or its corporate clones are indispensable. Social media was flooded with images of the multiple tiles of Zoomrooms as people took to the affordances of Zoom though it took only a few weeks before another concept leapt into the lexicon: Zoom fatigue; being Zoomed-out.

However, those screenshots of multiple faces articulated why Zoom succeeded: it channelled the affordance of the Community of Practice. Locked down and isolated, people joined these online as ways to express, articulate, make meaning, socialise and simply be present. The Cartesian ontological cliché was now: *I Zoom therefore I am.*

Research with 'COVID-19' in the title boomed like a micro-industry, particularly research connecting the affordances of forms of digital technology and the cognitive internet of things and other 'innovations' to the new educational normality. Much of the work, though, is underpinned by my core themes, particularly community. E-books, such as those edited by Ferdig et al. (2020) and Gill et al. (2020), compiled short experiential impressions of practitioners and shared tips in the context of teacher education and the Ferdig edited volume contained a whole section on community and collaboration while the Gill et al. book (2020) contained my own study of pedagogical being in lockdown and the importance of community. Rovai (2002, p. 6) had described "desire to learn," as the core uniting factor of collaborative learning in online communities: "Learning represents the common purpose of the community as members ... grow to value learning and feel that their educational needs are being satisfied through active participation" (p. 6). This was never truer than in 2020–2022.

Experiential research and evaluation studies of innovations within flipped classroom contexts, like that of Dianati et al. (2020), became plentiful. These researchers used the Technology Acceptance Model (TAM) to mine learners' perceptions of the affordances of Padlet (collaborative canvas), Kahoot! (live polling), and Cirrus (for annotation) but without deep recourse to the underpinning philosophies and pedagogies which are in fact the constants in times of change. How easy they were to use, how much fun they were and how useful they

were perceived to be are hardly deep phenomena, but the key conclusion that interactivity, collaboration and engagement are key again speaks to the opportunities for socialisation that underpin a community of enquiry approach to online learning (Andrew, 2014).

Studies of the affordances of key technologies for learning were plentiful before COVID-19. Schindler et al. (2017, p. 22) had shown:

> Of the technologies we reviewed, digital games, web-conferencing software, and *Facebook* had the most far-reaching effects across multiple types and indicators of student engagement, suggesting that technology should be considered a factor that influences student engagement in existing models. Findings regarding blogs, wikis, and *Twitter*, however, are less convincing, given a lack of studies in relation to engagement indicators or mixed findings.

COVID-19 seemed to be a catalyst for the speeding up of the fourth Industrial Age – Cyber-physical systems (following mechanisation, mass production and computer animation as bywords for the first three). We are told that, to prepare future graduates for work, universities must align their teaching and processes with technological advancements. Education-4.0 both mined the affordances of smart digital technologies and artificial intelligence (AI) and positioned technology itself as the curriculum for learning for an unknown future and the internet as the medium of this curriculum with educators as resource guides and curators of resources. The positioning of the learner as connection maker fostering the skill of adaptive thinking speaks to two of my key themes: (i) as social beings, a constructivist community-based pedagogy remains central; and (ii) thinking that is adaptive is one that necessarily engages with emergence as in the act of pivoting when a crisis like COVID-19 prohibits a planned way of acting or thinking.

On the horizon as one of the top ten work skills for 2020 was a third theme: transdisciplinarity (Diwan, 2017); literacy in and ability to understand concepts across multiple disciplines. Practitioner researchers Hoffmann et al. (2017) use 'transdisciplinarity' to refer to research that (i) tackles real life problems; (ii) addresses the complexity of these problems by involving a variety of actors from science and practice, and accounting for the diversity of their perspectives; and (iii) creates knowledge that is solution-oriented, socially robust, and transferable to both scientific and societal practice. Interestingly, this is what Barnett (2017) had landed on in his paper on 'Planes, possibilities, poetry': poetry can be a legitimate method in an emergent methodology and the world needs poetry power, as Amanda Gorman demonstrated at the 2021 US presidential inauguration. Further, in professional doctorates, Mann and Bull (2020) suggest, individual learners benefit from "a process of negotiating this form as the best vehicle for their claim of 'doctorateness'" (p. 120). There is no one way: diversity strengthens any ecosystem. Indeed, research can be powered by multiple forms and there are many more ways to get there in an era where emergent methodologies are more intuitively appropriate (Hesse-Biber & Leavy, 2008) than ones set in concrete for probation panels and audited *ad nauseum* with negative pedagogical value. Hesse-Biber and Leavy (2008) had argued:

> Emergent research methods have sprung forth as a result of where we have been, where we are, and where we envision ourselves going in the future …. Therefore, as the social world and our understanding of it have progressed, so too has our repertoire of social research methods. (p. 1)

This comment clicks with those of us who have experienced the early 2020s, and sets up the stories that follow as episodes of emergence.

We return to technology and its double-edged sword. An explosion of interest from Big Tech seemed epitomised by Bill Gates, who championed innovation and wrote "we cannot return to the business as usual or stop the virus" while the neoliberal and populist leaders around the world tried vainly to do just that. Technology companies positioned themselves as rescuers and problem-solvers, positioning opportunism as philanthropy, while in fact in November 2020, Apple settled an iPhone 'throttling' class action by throwing $113 million at

those whose technology had been deliberately slowed down to enhance built-in obsolescence. We download system updates buying into a narrative of fear and increasing security, never reading small print that tells us how the downloads are in fact booby-trapped.

EdTech (educational technology) vendors eyed up new markets. Any innovation-is-good agenda, like that at the heart of Education 4.0, needs to be considered with deep criticality and EdTech needs to be held to ethical account to be truly sustainable. Meanwhile, remote learning during COVID-19 deepened the gulf between rich and poor, UNICEF reported, leaving 600 million children "left behind" educationally due to remote learning (Chauvin & Faiola, 2020, online). COVID-19 was proving a catalyst for the undoing not only of the outdated ideology of neoliberalism, but also that of globalisation. Tertiary institutions dependent on international student flows proved unsustainable. Rotas and Cahapay (2020) offered an empirical study in the Philippines of the problems learners faced:

> ... unstable internet connectivity; inadequate learning resources; electric power interruptions; vague learning contents; overloaded lesson activities; limited teacher scaffolds; poor peer communication; conflict with home responsibilities; poor learning environment; financial related problems; physical health compromises; and mental health struggles. (p. 154)

This is not a narrative of the heroism of technology in the face of challenging times but quite the contrary. It is an affirmation of the need for human support, equity, community, pedagogical knowing and being open to multiple solutions.

The challenges are both sustainability, economic and pedagogic, and are related to engagement. These challenges remain beyond 2022, with distance learning necessarily playing a far greater role than class work even if a post-COVID age emerges. Universities have yet to grapple with the implications for international learners, or to respond to any opportunities. Even at a distance, educators can follow five key principles: (i) maximise output; (ii) make feedback immediate and applied; (iii) create opportunities for community engagement; (iv) apply process-based learning to foster productive and problem-solving skills, agency and resilience; and (v) create interactive spaces beyond the screen, linking wherever possible to the 'real world.'

These can be achieved simply by such techniques as these five: (i) exploit discussion boards and forums; (ii) harness the affordances of appropriately secure social media; (iii) build communities of practice via every e-medium; (iv) curate repositories of 'shared repertoire,' both key curricular texts and bodies of student work; and (v) set up rigorous task-based or project-based learning for receptive as well as productive skills – we must not forget the value of critical reading and reflective listening in a curriculum of 'produce, produce, produce.' These are core strategies to build new ways of thinking, doing, being and to impact belonging and becoming.

The core pedagogies were already in existence as Marshall and Kosta (2020) demonstrated. Flipped Learning, providing repertoire and tasks in advance of a synchronous learning event, has four pillars, all affordances of key learning management systems like Blackboard or Canvas and all possible in a Zoom room: (i) a flexible environment to offer fluidity; (ii) a student-centred learning culture; (iii) the intentional curation of content; and (iv) professional educator, informed leader or mentor feedback and facilitation. These align, Garrison (2016) demonstrated, with principles of communities of enquiry: (i) teaching presence by means of sequencing content and scaffolding; (ii) cognitive presence, meaning learning happens due to conscious acts of co-construction and negotiation; and (iii) social presence, meaning individuals can assert their own personalities (within an agreed culture of 'netiquette') and ways of being even as they learn within a community.

When COVID-19 came along, then, we already had the seeds of resilience.

NARRATIVE 3: COVID MADE ME DO IT – FOUR STORIES OF DOCTORAL LEARNERS

A note on methodology

Methodologically, this research is located in the interpretative paradigm and naturalistic in orientation. It is written as a phenomenological qualitative descriptive analysis and as such understands the social positioning of the researcher/narrator in the study and allows his implicitness in the processes of synthesising, analysing, and narrating to be part of the data (Sandelowski, 2000). It also allows the lived experience of others to permeate the membrane of the narrative, as in this section, where four WBL doctoral learner narratives are re-presented. These voices are re-presented under pseudonyms with the learners' (and ethical) permission. Although it is broadly an autoethnography of my own experiences with doctoral learners in both Australia and Aotearoa New Zealand and makes a contribution to the culture of WBL postgraduate study, it also strives to understand the participants and their situations and social learning through their own words and perspectives with a phenomenological lens.

It is, as mentioned, a fragment of a larger study, so it is inappropriate to use a thematic analysis. It affords the application of Bruner's (1986) distinctions between *life as lived* (what happened), *life as experienced* (affective issues of feeling, responsiveness, emotion, desire), and *life as told* (how I present the narrative). The writing deliberately strays from academic voice at times in order to express authenticity. For this reason, this paper is presented as a sequence of sub-narratives within a master narrative highlighting throughout the themes of community, sustainability, transdisciplinarity and emergence as the author's own key learnings as a mentor of work-based learning learners in the age of COVID-19.

Appropriately for a contribution to WBL, the contexts used as references in this study are not just academic in orientation; blogs, an increasingly important and authentic site of sharing knowledge among practitioners, are consulted too.

Narratives of doctoral learners

Among the transdisciplinary-oriented WBL projects of learners with whom knowing is co-constructed are topics such as these:

- Reducing recidivism among indigenous groups;
- Enhancing outcomes for Māori online learners;
- Using traditional medicine and wisdom to enable withdrawal from drug addiction;
- Improving cross-cultural outcomes for learners in vocational education;
- Enhancing workplace communication through increased criticality.

Typically, transdisciplinary projects are integrated towards creating sustainable solutions for human welfare and involve collaboration with workplaces, information sharing with real world or professional mentors as well as academic ones. Academic mentors in a COVID age are able to leverage the pedagogical opportunities listed above as affordances of technological media. However, for the learners, particularly those at the data collection stage who intended to use F2F interviews or focus groups as methods, or who planned to collect in-person observational data, there were a number of pivots required as a result of a forced move to digitised data collection.

The challenges included that they still had to operate within the bounds of signed-off Ethics applications or request changes, and that institutions and their policies had to themselves offer resilience rather than impose the letter of the law. A third challenge, and that presents as the core theme in my broader dataset, is the urgent need for information technology (IT) assistance on hand for moments when the behaviour of technology differed

from the training level of the educators; a fourth challenge consists in more flexibility required from research administration and higher education suppliers such as universities. All of this thinking on one's feet serves to emphasise the need for iterative and emergent methodologies in doctoral research, and in-built affordance of transdisciplinarity.

The following four stories are purposively selected narratives of the lived experience of being a WBL doctoral learner during 2020. These are narratives grounded in hermeneutic phenomenology, presented as close to verbatim as possible with identifying details fictionalised. As is often the case in WBL doctorates, the learners are 40 years plus and grounded by a key asset of life experience.

Jane's story (learner in Australia)

> *I'm now analysing my second case [in a case study approach], much slower than the intended time but what to expect when I returned to Australia during bushfire time in January and I had to take my children to Sydney for two weeks to escape the smoke. Then the hailstorm that cost my husband his job since the university house he was working at was damaged 60 per cent. Then we had the lockdown in March when children studied online and I couldn't come to my office until June and the project was postponed. During that lockdown time, I witnessed my friends struggling to change their research design since face-to-face data collection was no longer available. They had to change their ethics and collect data online instead. I shared with them my experiences with photo elicitation and how the photos could enable them to get better information.*
>
> *The biggest impact to my journey is the uncertainty of what would come next when the prime minister said international students should come home when our country had closed the border. Our mental, physical and financial wellbeing were tested during this time. It impacted my supervisors too, one couldn't go back to the UK and the other couldn't go to Thailand and worst of all, they were disappointed with the university policies that they no longer want to work for it.*
>
> *It was not until last week when I began with the second case that I discovered that even though we all conceptualise "Life is a journey" but for Vietnamese people, it's a journey in the water not on land. We were born from water and return to water when we die not from dust. So our journey will go with the flow, we can't just stop because the water will carry us away anyway.*

Alan's story (New Zealand learner)

> *Face-to-face interviews were originally planned as a method to facilitate qualitative data capture. However, the advent of lockdowns during COVID-19 disrupted this approach. Instead, online video interviews were undertaken. In assessing this change in approach, consideration was given to whether research participants would act differently in the absence of a formal physical face-to-face environment. Lived experience sharing and the ability to get people to relax and open up was anticipated to benefit from face-to-face and be disadvantaged from an online approach. In reality the opposite occurred. Participants were generally interviewed in their home environment providing the researcher with an insight into normal family life.*
>
> *Rather than detract from the interview, the informal home environment appeared to positively impact on quality and depth of the lived experience that participants shared. A total of 19 interviews were undertaken, capturing 22 hours of data. On reflection, the impact of formal versus informal settings, and the ability to engage with interviewees is also a key consideration for developing an understanding of group performance in [my own] co-design format.*

Maria's story (New Zealand learner)

I had everything planned. Although I anticipated a lot of work, I believed the project was going to be straight forward and it was just a matter of getting on with it. The reality of Coronavirus 2020 was that:

- *Few responded to my survey. I received automated responses which stated "So-and-so is no longer with this organisation. Please email info@_____."*
- *The lack of responses also meant that there were not enough volunteers for even one focus group.*
- *A social lockdown meant that I was in the house with my partner working from home.*

I remembered a conversation I had had many years ago with a friend who did social research for governmental agencies. She had mentioned a snowball technique for data gathering. Although I wasn't in research at the time, her description of the snowball technique made sense because of my childhood experiences in a snowy climate. This memory sent me back to the books to see whether the technique was appropriate for my project.

I eventually found my way through the data collection period by embracing criticality and resilience. Criticality led me to investigate methods and techniques in more depth. I feel that I learned more through this than I would have learned through the original project plan.

My experience and memories helped me be resilient in the face of all the pivots required. I remembered being in danger on thin ice, too far away for anyone to help if I fell through. Even as a child I knew I needed to control my thoughts, not panic, and concentrate on what I knew would take me back to safety. This meant focusing on my next step, and then the next, and then the next, until I could skate back to the group.

This memory helped me during the data collection period to focus on the next possible task at hand. Each small task accomplished brought me closer to my goal of completing the project. Even if this task was recognising that another pivot was required. Therefore, each small task completed was a reason to have a small celebration in my heart because I was inching ever closer to my goal.

I feel that the trials during the data collection were the best thing that could have happened to me. I am now more confident about what I know and why I know it. I entitle my story "COVID made me do it."

Đuc's story (learner in Australia)

The COVID-19 pandemic had a big impact on my psychology and the closure of the campuses due to the pandemic had a negative influence on my education. During these days we didn't even dare to see a doctor every time we had a health problem.

Those were the days in March 2020 when numbers of infected people in Australia was increasing rapidly every day. This was also a time when I was under a lot of pressure because I had background illnesses and I also had to take care of my two children, while we suffered with unstable financial conditions. At that time, I did not know what to do but to buy some necessary medicine and eat only rice like my Vietnamese ancestors in past crises.

Ten days before the end of March was the time when the Australian prime minister announced the border closure, and this was also the time when Vietnamese in Europe massively returned to their home country before closing the borders. This means that my two children and I did see a chance to return to Vietnam.

Although the COVID pandemic was in such an emergency, I still went to work on campus. At that time, I still felt safe working there, because the school had switched most of the F2F classes to online learning, so it was quieter than usual. This experience did not take long as by March 28, it was one of the darkest days of Australia with 469 new cases. It was also the day when it looked like Australia was losing control of the pandemic and may fall into the same situation as European countries at the time. Also, on these days I had been repeatedly informed that the school would close soon.

> *Then the undesirable things came. On April 2, the school announced the closure of all campuses. So, my worries had peaked because my family shared a house with another family which was not large enough, so we did not have a place to work and study. Our homesickness was huge. Because there was such a terrible outbreak here and that we were in difficult financial conditions, we were unable to rent private accommodation to study and work from home. So many days passed, then in July the epidemic broke out again in Victoria with the number of new infections nearly 800 cases per day. I will not make my December submission deadline and the school has shown little support for students in such conditions as mine.*

DISCUSSION

While the two international learners reported anguish, much of it was related to *Weltschmertz* (reflected pain of the world) and geographical powerlessness, especially in Đuc's Story. The psychological pain mentioned in Rotas and Cahapay's study (2020) is raw and exacerbated by additional crises of health and disaster. We also see a resilience there, as if survival is a genetically and ancestrally ascribed response to uncertainty. Distance from mentors, also disadvantaged by geography, complicated the pedagogical dynamic. The loss of designated study space hit hard, since spaces for writing were associated with being away from home. Also present is a sense that tertiary education in Australia failed to support its international students, and we know from other studies that they were engaging in redundancy regimes just to keep afloat without yet resorting to Minnesota's ban (Andrew, 2020a). Jane's supervisor took redundancy, tired of the university's adherence to unsustainable neoliberal thought and unable themselves to pivot in the ways that supercomplexity had suggested.

While universities' managing for an unknown future failed, learning for one enabled some limited resilience. Jane describes the pivots required by peers, marooned in the data collection stage. An aspect of an emergent methodology – photo elicitation – grounded Jane and allowed her to share her experience with peers. The value of peers, family and the communities and networks to which we belong strongly points to the need for pedagogical being that validates a community of practice approach (Andrew, 2020b).

The two New Zealand stories both describe the value of pivoting. Alan found stepping out of the comfort zone of F2F interviews into the space of Zoom proved an unexpected boon. People actually had time to talk now, and the quality of the thick text data exceeded expectations. Once again, the groundwork for understanding the positive affordances of e-interviews (via Skype) had already been done (Mirick & Wladkowski, 2019):

> Using Skype for qualitative interviewing offers significant benefits for both researchers and participants … Skype offers the potential to address some of the challenges of qualitative interviewing by allowing flexibility in terms of time and space of interview, while maintaining the participant's privacy and allowing them to be interviewed in a location in which they are most comfortable. (p. 3069)

Maria's story speaks to at least five of the six domains in resilience theory (Rossouw, 2020): vision (purpose, goals and congruence); composure (staying in control); reasoning (problem-solving and resourcefulness); health (nutrition, sleep, exercise); tenacity (persistence, realistic optimism, bounce back), and collaboration (support networks, social context, managing expectations). Locked down at the crucial point where data collection was due to start, Maria found her original target group, quality specialists in higher education, suddenly either redundant or disillusioned or both. Resourcefully, she considered her networks and applied her enquiry to comparable domains, effectively creating a multiple case study where previously she had wanted to analyse thick data using grounded theory. A chance reflection brought her to snowballing as a sampling method. She validates criticality and resilience as keys to her survival.

Although Maria does not specifically mention it, we are reminded, too, of the flexibility and agility built into action research with its iterative nature. Having no pre-determined variables, it affords an evolving design which

in turn expands the scope, leading to deepened insights. All learners embarking on doctorates in the 2020s will require methodologies with a degree to emergence and the capacity to pivot.

As with the international learners, she found courage in memories and experience, and reflecting on critical incidents from the past helped point the way forward. This, of course, points to the positive affordances of both emergent methodologies and transdisciplinarity. Emergent methodologies are born of turbulent environments – social, political, economic and technological – and inspire epistemological and methodological innovation because the research gap itself keeps shifting (Hesse-Biber & Leavy, 2008). The scientific process becomes one of continual renegotiation, and this is entirely like the nature of the real world and the workplace. Engaging with the emergent tallies with what we know about our grappling with supercomplexity (Barnett, 2017; Krause, 2017). We see, too, as McPhee et al. (2018, online) maintained: "transdisciplinarity is increasingly relevant to innovators ... whose technologies or solutions are aimed at addressing complex societal problems." A saying attributed to Albert Einstein appropriately rounds off this section: Learn from yesterday, live for today, hope for tomorrow.

NARRATIVE 4: CONCLUDING THOUGHTS

This paper has journeyed through four narratives with multiple micro-narratives embedded in my own curated master autoethnography, itself embodying the principles of transdisciplinarity, emergence and community, and suggests that research, both postgraduate and professional, may well benefit in terms of sustainability in the light of these concepts. All of this needs to be understood critically in the context of my – and our – reflective trajectories through learning via technology up to and in the 2020s. This is because, I have argued, behind the bells and whistles of technology lie essential humanistic pedagogical principles such as maximising creativity, and emphasising belonging and becoming. Leveraging the possibilities of flipped learning is also key. There are thoughts that emerge from my experience of mentoring and educating online in a time of crisis. Some of these are related to emergent trends, and others to the capacity of humanity.

As to the former, it is clear COVID-19 is the first of the postmodern pandemics and has galvanised the effective use of many digital learning platforms and tools, but also brought opportunistic players into the market. At no time in our lifetimes has critical thinking and understanding ever been so essential. The Education 4.0 movement predated COVID-19, but the pandemic accelerated it because it already described the teaching and learning conditions of an imagined future. We can harness the affordances of technological pedagogical innovations critically and with ethics and sustainability as selection principles.

As to the latter, the lost social and human dimensions of research remain the major casualty of research in the COVID age, but community of enquiry/practice approaches help mitigate the loss. Researchers are producing more papers than ever but those which fail to incorporate 'pivots,' embed resilience or recognize the fundamental impacts of COVID-19 in the methods are instantly outdated or flash-in-the-pan easy-sell outputs to satisfy unsustainable and outdated audit culture.

The idea that research can be pre-planned and fixed in time and space is out of time. More iterative and emergent methodologies are the future and, in fact, are now. Along with the rise of cutting-edge, hybrid, emergent methodologies, research in WBL domains increasingly necessarily occupies as a space where transdisciplinarity meets sustainability. Methodological diversity addresses wicked COVID-age human-centred problems and more viably assures the future of educational research. Transdisciplinarity is a paradigm that embeds the hope of education and enterprise working together for mutually better outcomes.

This study has been part of an ongoing story of hope.

Martin Andrew operates as a creative mentor in postgraduate programmes, including Master and Doctorate degrees in Professional Practice. Prior to his four to five years supporting the College of Work Based Learning in Otago, New Zealand, he had sojourned away from his hometown of Ōtepoti/Dunedin with two honorary posts at Melbourne universities in Creative Industries and Transnational Education (TNE). His work and research have become increasingly focussed on doctorate education and supporting learners to reach their own personal best through critically reflective practice and writing. A transdisciplinarian, he emphasises that his past disciplines have included Education, Drama, Linguistics and Writing, Creative and otherwise. He holds honorary positions in Australia, Vietnam and Indonesia.

https://orcid.org/00000-0002-0108-5195

REFERENCES

Andrew, M. (2014). Community and individuality: Teaching and learning insights from a postgraduate online writing program. *SAGE Open, 4*(3), 1–13. https://doi.org/10.1177/2158244014544292.

Andrew, M. (2020a). Behind voluntary redundancy in universities: The stories behind the story. *Australian Universities' Review, 62*(2), 14–24. https://www.nteu.org.au/covid-19/article/Behind-voluntary-redundancy-in-universities%3A-The-stories-behind-the-story-%28AUR-62-02%29-22296

Andrew, M. (2020b). Reflecting on then and now: Pedagogical being in lockdown via Zoom. In L. Gill, O. McGirr, M. Doesburg, D. Fridberg & M. Barron (Eds.). *Collective voices of COVID-19: Otago Polytechnic experiences* (pp. 109–115). Otago Polytechnic. https://issuu.com/opresearch/docs/collective_voices_of_COVID-19_-_otago_polytechnic_

Barnett, R. (2000). University knowledge in an age of supercomplexity. *Higher Education, 40,* 409–422.

Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development, 23*(3), 247–260.

Barnett R. (2017). Researching supercomplexity: Planes, possibilities, poetry. In L. Ling & P. Ling (Eds.), *Methods and paradigms in education research* (pp. 291–308). IGI Global. https://doi.org/10.4018/978-1-5225-1738-2.ch018

Bengtson, S. E. (2017). Supercomplexity and the university: Ronald Barnett and the social philosophy of Higher Education. *Higher Education Quarterly, 72*(1), 65–74.

Bruner, E. M. (1986). Introduction: The opening up of anthropology. In S. Plattner & E. M. Bruner (Eds.), *Text, play and story: The construction and reconstruction of self and society* (pp. 1–16). American Ethnological Society.

Chauvin, L. O., & Faiola, A. (2020, October 16). *Remote learning is deepening the divide between rich and poor.* The Washington Post. https://www.washingtonpost.com/world/2020/10/16/coronavirus-peru-remote-learning-inequality/?arc404=true&fbclid=IwAR3yfCY9IElmHc7nEMzbWGHY_Fd5-n839s53kXLVYyd67TI-K3-yMxDI7MA

Dianati, S., Nguyen, M., Dao, P., Iwashita, N., & Vasquez, C. (2020). Student perceptions of technological tools for flipped instruction: The case of Padlet, Kahoot! and Cirrus, *Journal of University Teaching & Learning Practice, 17*(5). https://ro.uow.edu.au/jutlp/vol17/iss5/4

Diwan, P. (2017, August 6). Is Education 4.0 an imperative for success of 4th industrial revolution? [blog post] *Parag Diwan.* https://pdiwan.medium.com/is-education-4-0-an-imperative-for-success-of-4th-industrial-revolution-50c31451e8a4

Ferdig, R. E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (Eds). (2020). *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field.* Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/p/216903/

Garrison, D. R. (2016). *Thinking collaboratively: Learning in a community of inquiry.* Routledge.

Gill, L., McGirr, O., Doesburg, M., Fridberg, D., & Barron, M. (Eds.) (2020). *Collected voices of COVID: Otago Polytechnic experiences.* Otago Polytechnic. https://issuu.com/opresearch/docs/collective_voices_of_COVID-19_-_otago_polytechnic_

Hesse-Biber, S. N., & Leavy, P. (2008). *Handbook of emergent methodologies.* The Guildford Press.

Hoffmann, S., Pohl, C., & Hering, J. G. (2017). Methods and procedures of transdisciplinary knowledge integration: Empirical insights from four thematic synthesis processes. *Ecology & Society, 22*(1), 578–594. https://doi.org/10.5751/ES-08955-220127

Jaschik, S. (2021, January 19). Minnesota halts PhD admissions in 12 departments. *Inside Higher Ed.* https://www.insidehighered.com/quicktakes/2021/01/18/minnesota-halts-phd-admissions-12-departments

Krause, K. (2017). Scholarship and supercomplexity: Policy implications. In L. Ling & P. Ling, (Eds.), *Emerging methods and paradigms in scholarship and education research* (pp. 263–282). IGI Global. https://doi.org/10.4018/978-1-7998-1001-8.ch015

Mann, S., & Bull, R. (2020). Can my thesis be a novel? Toward a learner-centred process for defining the practitioner thesis. *Scope: Contemporary Research Topics (Learning and Teaching), 9,* 118–30. https://doi.org/10.34074/scop.4009013

Marshall, H. W., & Kosta, I. (2020). Fostering teaching presence through the synchronous online flipped learning approach. *TESL-EJ, 24*(2), 1–14.

McPhee, C., Bliemel, M., & van der Bijl-Brouwer, M. (2018). Transdisciplinary innovation [Editorial]. *Technology Innovation Management Review* (August). https://timreview.ca/article/1173

Mirick, R. G., & Wladkowski, S. P. (2019). Skype in qualitative interviews: Participant and researcher. *Perspectives. The Qualitative Report, 24*(12), 3061–3072. https://nsuworks.nova.edu/tqr/ vol24/iss12/9

Rossouw, J. (2020, January 9). The 6 domains of resilience [blog post]. *Driven.* https://home.hellodriven.com/6-domains-of-resilience.html

Rotas, E. E., & Cahapay, M. B. (2020). Difficulties in remote learning: Voices of Philippine university students in the wake of COVID-19 crisis. *Asian Journal of Distance Education, 15*(2), 147–158.

Rovai, A. P. (2002). Building sense of community at a distance. *International Review of Research in Open and Distance Learning, 3,* 1–16.

Sandelowski, M. (2000). Focus on research methods: Whatever happened to qualitative description? *Research in Nursing & Health, 23,* 334–340.

Schindler, L. A., Burkholder, G. J., Morad, O. A., & Marsh, C. (2017). Computer-based technology and student engagement: A critical review of the literature. *International Journal of Educational Technology in Higher Education, 14*(25). https://doi.org/10.1186/s41239-017-0063-0

Article

doi.org/10.34074/scop.6003013

HORNS OF DILEMMAS: DOCTORAL LEARNERS SHARE THEIR WORK-AROUNDS

Martin Andrew, Anne Alkema, Sandy Geyer, Claire Goode, Steve Henry, Vicki Rangitautehanga Murray, Robert Nelson, Bonnie Robinson and Jeremy Taylor

INTRODUCTION: LEARNING VIA DILEMMAS

The world of professional practice, and hence of professional practice qualifications, is informed by a range of core exploratory theories: transformational learning (Mezirow, 1991) and experiential learning theories (Kolb, 1984); and critical incident/event technique (Woolsey, 1986), which more recently morphed into an educational theory itself (Tripp, 1993). Famously Kolb wrote: "learning is the process whereby knowledge is created through the transformation of experience" (1984, p. 38). These approaches accord with epistemologies where 'knowing' or 'coming to know' comes from responding with initiative, innovativeness and resilience to moments or even extended periods of flux, uncertainty and the unforeseen. These are responses, characteristic of learners in professional learning settings, that I have elsewhere called "thinking on your feet" (Andrew & Razoumova, 2019). This paper brings together nine short narratives of learners on a Doctor of Professional Practice (DPP) programme sharing their dilemmas and 'work-arounds' or solutions. The study demonstrates the resilience that can result from concerted individual acts of reflection; and, on a collective level, illustrates the range of complex situations in which those on doctoral journeys can find themselves.

In considering learners' responses to dilemmas in educational theory, we can draw a line between John Dewey and Ronald Barnett (2000, 2004), scholars a century apart. Common to the theories informing professional practice is the necessity of encountering Dewey's 'disequilibrium' (1916) to generate new knowing. What (young) learners meet, in Dewey's formulation, are decentring situations whose "whole full character is not yet determined" (p. 150). A process of emerging from disequilibrium via reflection – that sense of 'what just happened?' – involves a centring act of reflective learning. Mann et al. (2009) postulate that fresh knowledge and applied skills are acquired when professional practitioners face disorienting dilemmas and think them through reflectively. We are better positioned next time, in the manner of Schön's (1983) reflection for action or Mezirow's (1991) reflective-change-action process of perspective transformation.

Professional practice enables DPP learners to generate "authentic being" (Barnett, 2004, p. 259) to create meaningful identities for our unknown and COVID-19-inflicted futures. Our collaboration, in a decade hit by COVID-19, is the kind of work that characterises times of flux. We write of our engagement in real-world responsiveness and how it develops "a self that is adequate to such an uncertain world" (p. 254). This refashioned sense of ourselves as engaged professionals is achieved through "encountering strangeness ... forming one's own responses to it" (Barnett, p. 257). Making sense of mayhem, Barnett (2000) had argued, will long be a feature of higher education in a super-complex epoch, where knowledge for some appears to lack status and legitimacy. The crisis of post-truth that marked the 2020s coincided, fatefully, with the COVID-19 pandemic, which forced

many researchers, doctoral and beyond, to pivot with resilient flexibility, but that is easier said than done (Connor et al., 2021).

LITERATURE ON DILEMMAS

There is a body of literature on researcher dilemmas, but very little of it lies in the domains of the personal and the affective. I will select four representative studies. Literature primarily discusses ethical dilemmas. Firstly, Davison (2004) 'dilemmarises' the conflict and distress felt by social workers working with vulnerable participants; the issue of over-empathy is a self-care issue. Next, Ngozwana (2018) poses a cross-cultural dilemma – what is ethical in western ethics boards may not accord with the ethics of populations in Africa. The need for a context-specific ethics is hypothesised. Third, in the earliest-dated article entitled 'The researcher's dilemma,' Bogart (1962, but updated) poses a question applicable, with the details changed, to all professional researchers: how do marketing researchers resolve their dual orientation as professionals and as businesspeople? Applied to each professional researcher, we see the issues of unequal power, conflict of interest and the potential for monetary factors distorting the study.

Fourthly, the fact that ethical dilemmas tend to arise 'in the moment,' regardless of the expectations framed by approved ethics procedures which are based around anticipation and precedent, means that researchers must draw on skills of reflexivity, questioning their own motivations, assumptions, interests and drawing on capacity for integrity in issues of consent and confidentiality, and autonomy and altruism in issues of access and equity (Reid et al., 2018). Personal dilemmas are nuanced, particular to specific situations, involving management of multiple roles. They can be seen as key moments on the journey towards doctorate autonomy (Bitzer & van den Burgh, 2014).

Another set of relevant literature is that problematising intersubjective relations between mentors and mentees, a field led by two scholars, Barbara Grant and Catherine Manathunga. Grant (1999) viewed the supervisory aspect of the mentoring relationship as comprising dimensions that make it problematically murky and opaque. In contrast to the sound pedagogical structure of the host organisation, the relationship is metaphorically a "rackety bridge" involving continuous negotiation of the dynamics of desire, power and identity. In Aotearoa New Zealand, mentoring "is an especially delicate dance" (Johnson-Bailey & Cervero, 2004, p. 7), considering the interconnectedness of multiple and diverse identities and such factors as culture, gender and power. Grant (1999) wrote:

> The supervisor's and the student's desires are implicated in ways that make the relationship potentially complicated and volatile: desires to please, to challenge, to do well, to demonstrate independence, to push towards independence, to resist, to be respected by, to be recognised as clever, to become like, to become authoritative, desires for the (powerful or vulnerable) other. (p. 4)

This is a risky journey because aspirational identities are at stake, and trust and empathy are required, amongst other facets.

Manathunga (2007) viewed the mentoring aspect of supervision as paternalistic, fostering disciplinary self-production. In the professional practice doctorate, however, the transdisciplinary approach enables the learner to claim the parental role and foster their own space across the disciplines of their endeavours. In a personal communication with Manathunga (2019), explaining my role as a mentor in her own field of expertise, I propounded the DPP's more nuanced understanding of doctoral mentorship, encompassing elements of the coach, the counsellor, the guide, and, to cite Abrams (1953), the mirror and the lamp. Today's learner's journeys are not about paternalistic replication or re-conquering empires, but innovative approaches to practice in action.

METHODOLOGY

All narratives are written by candidates on the DPP programme in the College of Work Based Learning. The project emerged from an idea presented in one of the regular Community of Practice (CoP) kōrero, where mentors and mentees, with a mutual interest in improving practice by sharing, pool experience in a safe and situated space of critical reflection (N=20, attendees at kōrero). The idea involved creating a research artefact that was a product of the group's shared repertoire that articulated with *Scope*'s theme of work-arounds, while at the same time leaving behind a set of stories in which future learners may see their own stories mirrored. In addition to generating interest within the group, email invitations were sent to the broader group membership, including non-attendees both after the kōrero and to usher in the new academic year (N=40, enrollees e-mailed). There were ten contributions, two anonymous, one withdrawn, leaving nine. It was the start of the year; people were frantic.

In 1998, Wenger identified the three crucial dimensions of a CoP: mutual engagement, a joint negotiated enterprise, and a shared repertoire of negotiable resources accumulated over time. Community of practice theory affords shared knowing to emerge from the pooling of stories or 'repertoire' in response to the same cue – in this case a core dilemma on your doctoral journey and how you worked around it. This represents an example of a joint, negotiated enterprise. As an intervention in mentoring and professional development, the DPP CoP affords a chance for social learning to coincide with tacit knowing, offering value to both individual and community (Bandura, 1986). In Aotearoa New Zealand, authentic CoPs might have as key tikanga: manaakitanga, or embracing the mana of others; whanaungatanga, valuing and building relationships; and kotahitanga, that sense of commonality of goals in the learning journey (Royal, 2007).

Community or collaborative autoethnography (Chang et al., 2013) is an emic (insider) methodology of multi-vocal sharing or pooling of experiences and thoughts by individuals wishing to offer multi-faceted views, in this case of the notion of the researcher's dilemma. Community autoethnography is "a relationship-making activity among researchers who participate in and co-construct each other's existence" (Toyosaki et al., 2009, p. 59). It pivots on multiple autoethnographers in a research community sharing lived experiences on pre-identified sociocultural phenomena and collaboratively analysing and interpreting them for commonalities and differences (Hernandez et al., 2017). It uses writing as method of enquiry and narratives, including allegory and parable, as method of data presentation. The method affords creative and indigenous forms as in 'Tremain's dilemma' and 'One day a taniwha,' and generally uses a first-person point of view, but may also use a third person narrator. The element of the pakiwaitara (parable) is suggested implicitly by the nominal titles and explicitly by 'One day a taniwha.' Such methods ensure, as Richardson and St. Pierre (2005) proposed, texts/writings that adapt to the kind of multiple, political and social world we inhabit, one of uncertainty. The result is intended to be a communal sense of real experience (Richardson & St. Pierre, 2005).

FINDINGS: THE NARRATIVES

Here we present nine elicited, authentic, narratives where DPP students outline a key dilemma in their journey, and indicate their work-arounds or how their thinking was reconfigured to accommodate the dilemma.

Conrad's dilemma

For the most part, my doctoral journey has been a journey of self-discovery and relative enjoyment; still, one of the most troubling aspects I have found is when to stop researching and to start writing. I have found that researching can be addictive; finding the next great article can take you on an adventure. Also, if I am honest, researching is a safe place for me because as long as I keep myself in the research phase, I do not need to face the horrifying task of actually writing or even worse, facing my supervisor's feedback. To overcome my inertia, I

found it helpful to set time limits and insert placeholders into my chapters. My mentor in an overseas university where I worked would say that research without deadlines is just a hobby, and through having time limits, you make a line in the sand to stop reading and to start writing. Secondly, who said you need to have read everything before starting to write? In fact, my experience has led me to believe that small gaps in knowledge can be beneficial. This is because you can return to your work after making an initial draft well aware that it is not perfect, but at least you now have something tangible to review.

Rosie's dilemma

The purpose of the Learning Agreement *[the name given to the output of the proposal stage of the learning process]* is to reveal issues from the past that help explain who Rosie is today, as well as predicting who she is capable of becoming. What Rosie never anticipated, though, was that it would reveal unresolved issues from organisations past – two that managers refused to even acknowledge were real, and one that was subject to too little intervention on their part, too late. Suddenly, Rosie's positive world was upended and feelings of inferiority that made imposter syndrome seem almost a desirable thing to have again. What to do? What evidence would be believable – in Rosie's mind – to say that a Doctorate of Positive Possibilities was achievable? To continue? To live, or to shuffle off this mortal coil and avoid the negative completely? Which voice to listen to since the unresolved issues could not be resolved retrospectively? The resilience solution came from a completely unexpected direction that isn't directly related to Rosie's work: photography. In the middle of each week, study and work stop, the camera comes out, photography becomes Rosie's total universe – one where performance improves week on week and the results can spread pleasure without controversy. Maybe there's a new dilemma now – Doctorate of Positive Possibilities or Delight with Photographic Prowess?

Carla's dilemma

The best laid plans …

> *Been worried about this case study thing after reading the Pearl Smith article on case studies. Just feel sick at the thought of having to redo the methodology. However I think what I've come up with in terms of restating what the cases are will work. Will see what* *** [mentors] *think.* (Learning log, 8 October 2020)

Like probably all doctoral students, I had invested a considerable amount of time working out which approach was best suited to my study – the introduction and trial of a professional standards framework (Tapatoru) for foundation educators. Two years into it, I had planned it down to the *-nth* degree and was feeling a bit chuffed with the idea of using the exploratory case study approach with multiple case studies. Then Pearl Smith (2018) arrived in my world. While my initial reaction was to be a bit cross with her for interrupting my best laid plans by saying case studies needed multiple data sources, I recognised that she was right and that I did have to rethink what counted as evidence for case studies.

Compounding this were the shadows of the Reform of Vocational Education (RoVE) and COVID-19 which meant Tapatoru did not get the uptake I had anticipated, therefore I did not have access to the multiple cases I had anticipated.

But after getting over *"feeling sick"* I realised that I did have multiple data sources – literature, interview data, written and electronic artefacts, observations of online fora, survey data, data gathered informally over nearly two years of conversations, and my learning log. Therefore, I switched to Tapatoru as the single case. While this may be seen by some as 'juggling for convenience,' placing Tapatoru as the central character meant a wider story could be told about its introduction, uptake, impact, and value.

'One day a taniwha'

Myths and legends of dragons and sorcerers have woven spells upon mankind throughout the eons. Tipua, taniwha and the enigmatic marakihau are similar magical sea entities brought to life in te ao Māori through pūrākau (traditional storytelling). 'One day a taniwha' is a rendering of one of the many heart stopping moments on the Doctor of Professional Practice journey when doubt as to the value of my research scared the living bejesus out of me. It is told as a fantastically fictitious pakiwaitara (a parable).

A jolt of thunder resounding deep in the dominions of Ranginui (sky father), startled the little marakihau. She was basking amongst her favourite toitoi on the banks of the tributary, deep in thought. Turning aside from her half-finished composition she glanced upward, puzzled to see Tama-nui-te-ra beaming brightly in the otherwise clear skies. Lowering her gaze slightly, she detected out beyond the shoreline something creating a plume of water in its wake, moving at speed toward the river mouth. Lil Mara's senses filled with trepidation and a mixture of curiosity as the approaching form, a marvellously intimidating creature loomed into view. Her scaly outer coat normally a blend of soft greens blushed with tan, deepened into the chameleon colours of her secluded sanctuary. Reclusive by nature, instincts on full alert, motionless and silent she watched with amazement at the hoopla and fanfare being made by the new-comer. A quiet snort through dilated nostrils she relaxed considerably when she realised the caller must be the infamous three-headed taniwha.

Fire spewed forth, and it writhed and roared with zealous ferocity. Mara marvelled at the spectacle; it was truly impressive. The howls, cries and squawks of the sea denizens including several of Mara's set were fervent.

As quickly as it had appeared, taniwha faded back beyond the Caerulean Void.

Tranquility restored; Mara wondered how the local inhabitants would respond to her after the taniwha recital. She wondered if they would rebuff her or cast her off as she was, after all, insignificant in comparison. However, just as the wise ones had assured her, one by one the water guardians cruised into her cove and beneath the blue moon, the little marakihau sang. She sang of the oceans and rivers of her ancestors. She sang of the loss and suffering of her forebears. She sang of hope and providence for future generations. Her voice was soft and mellow, the lyrics were sentimental and melodic. As she reached the crescendo, the onlookers joined in elegiac harmony, it was her song, it was their song, and they were one.

Tremain's dilemma

How to do a DProfPrac in your sleep – a pragmatic doctoral dilemma

I'm doing a Doctor of Professional Practice. It was a moment of madness really, that "yes." But I filled out the forms and paid the fee, and so here I am, 8:30 p.m. after a long day at work and the early evening spent on family duties. And now I am going to study at doctorate level. Really?

The DProfPrac was 'sold' to me as the doctoral qualification you could do while working. "It's practice based" they said, "it's about reflection on your life and work" they promised, "it just integrates." Truth, and lies. There is certainly plenty of room for discovering the richness of my own journey of practice. But no one told me, and I didn't think hard enough, about 'time.' Time that I need to search data bases for secondary material only to find the perfect article is not available tonight at 11 p.m. when I really need it. Time to take good notes, so I don't read the same article twice, which is of course a waste of time. Time to pin research participants down who are busy with their own jobs. Time to think, so I can theorise not just summarise. Time, time, time – that thing no parent with a full-time job ever has, is now an addictive craving. And this is without COVID, which stole two years of time from most of us working in health and hasn't stopped being time greedy.

But through this blur of busyness, there starts to emerge a methodology and a method that makes sense for my research and my context. Writing. Writing as enquiry, writing as the approach and the 'how to' of research, not just the product. Having absorbed literature on autoethnography, messy enquiry, and praxis reflexivity, I begin to change the way I approach this DProfPrac. Whenever I feel stumped, I just write. I leap in. I experiment with styles – narrative, first person, dialogue, fictionalised. I turn off my inner critic, kick out the monster of doubt, and tell myself that nothing is out of bounds in this post-post-modernist, post-positivist, even post-constructivist world of autoethnographic practitioner research. What counts is meaning, what counts is contribution, and what counts is writing that is interesting enough to keep me awake at midnight. Writing needs time, but it creates time, because within the act of writing the research emerges. I write myself into what I know, and what I still need to know. The act of writing is simultaneously philosophy, epistemology, methodology, method, and outcome. Very time efficient.

I still need time. This DProfPrac journey has been very long, and I want to get to the end. COVID will never be my friend. But writing is.

Don't have time for a Doctor of Professional Practice? Just write it.

Eva's dilemma

My organisation offered the Doctor of Professional Practice as a high-level means of professional development (PD), offering a strong fees subsidy, which was attractive. However, that promise of fees was not matched by one of time. Over the first two years of my project, I felt my passion, so strong at the outset, begin to deteriorate. The 'have to' list in the workplace grew. Colleagues left, and their workloads subdivided amongst us. New projects and curriculum opportunities, themselves unrecognised on-the-job means of PD, shallowed all windows in my weeks and moments in my months. My DProfPrac was, in effect, asphyxiated from without. I was close to withdrawing, but there was hope in a mentor's insight. They listened and applied an important principle to my line of enquiry: my DProfPrac needed to move even more closely in line with my work, so that, documented reflectively, my work was essentially my DProfPrac. This alignment came with the necessity of refining, refocussing, renewing. I'm now on track with a more manageable DProfPrac, weary of oncoming unknown crises, but sure at this moment that I have found a clearing in the forest.

Avatar's dilemma

As a leadership preparation practitioner, I value my capacity to conduct collective energies and make strong individual connections to facilitate an interactive and engaged learning experience with participants. My Doctor of Professional Practice study aims to shift leadership preparation to a younger age group of student participants (thirteen years old), to what previous research in my field has explored. COVID-19 lockdowns close the door on my personally invigorating and professionally stimulating comfort zone of delivery early into my research planning. Time passes quickly as I bang forcefully on other doors to find an unfamiliar one open. To step through it requires company funding and a shift of my role in learning facilitation from "practitioner fully present" to avatar.

Alone she seems stagnant, with limited body language and through her flat speech bubbles and expressionless face my connection feels lost. Lively student actors are sought to present via scripted videos and younger avatars join the online stage. Their energies narrate and connect through a digitally developed platform to flow my knowledge, my experiences and my energies to the research participants and beyond. Working around COVID-19 forces me to let go of myself, to facilitate research progression and practice growth.

Alison's dilemma

I bumped into a colleague on the last day on campus and she asked how everything was progressing with my project. I said that I was hoping to "start coding" over the break, but she said something along the lines of 'not coding, theming.' Isn't coding necessary before I can identify themes? Through my reading over the past couple of days, there seems to be conflicting advice. Some texts suggest using research question and sub-questions to guide coding; others suggest not looking at the questions at all. I've gone back to the most recent Braun and Clarke (2022) and this would seem to be the difference between deductive and inductive analysis (I think). Going with inductive, I look at the data without focussing on my research questions, so coding/theming (?) is data-driven. I have several other articles/chapters I can read, but am concerned I'm not using this time to the best of my ability – am I maybe delaying the start of data analysis because I am really nervous about how to begin?!

Still no clearer on where or how to start, I thought to myself "Hang on … stop worrying! How would you do this if you were asking teachers to identify and group themes during a facilitated workshop?" That led me to getting a pile of coloured sticky notes, writing each identified theme on a separate one, and then grouping notes with similar themes on sheets of paper. In this way, I was able to check that there were no repetitions, and also reflect on what it was that brought these themes together, and what name could be given to these groupings or categories. I wrote preliminary category names on each sheet of paper, meaning that any individual sticky note(s) could be moved without my being influenced by any notations made on the note itself. This allowed me to refine groupings as I worked, for example, by combining or sub-dividing categories. Once I'd started, and could see the progress, it was actually really enjoyable. Putting my 'professional practice' head on, instead of my trepidatious researcher head, really helped me stop tying myself in knots.

Morris's dilemma

My dilemma arose from a deep need to be honest with one of my mentors. Initially my mentor had been a good fit: they had subject matter expertise in a space unfamiliar to me; I had admired them over a decade as a fellow outlier to conventionial formal education; they had the capacity to bring my work to the mainstream to be understood and interpreted.

One year on, the dilemma arose: something fundamental was wrong. I felt like I was being supervised rather than mentored – there was no sense of walk alongside with me. I felt I was being told I was doing it wrong and my writing was poor. The method of relaying feedback left me feeling low. Two years in, as my focus shifted, it became clear this mentor was now unable to add the value I sought. My work underwent a paradigm shift, and we were now in different epistemological universes.

I had two options: do I assert myself and say thanks for the input but it is no longer working for me. Do I use this tension as a valuable space to generate deeper enquiry and be loyal to the original intent? The fact that I had the dilemma at all showed me there was a deficit on trust in this mentorly relationship. I was assured there was no shame to change mentors; this gave me the courage to have an honest conversation and admit I had decided to change. This was a significant step in my owning my content and the process of my study. I am very grateful for their support and their significant contribution to my learning.

DISCUSSION

The range of dilemma narratives extends from those experiencing a critical moment (Alison's realisation that professional practitioners may have more freedom in coding, Carla's gratefulness for new advice about multiple data sources; Rosie's discovery of a creative route around imposter syndrome; Tremain's increasing comfort with writing as a method of enquiry; Conrad's strategy of leaving small gaps to coax mentor feedback) to those getting used to a new normal (adjusting to avatar-led leadership, refocussing the research phenomenon, learning to edit as you write to control word-sprawl, realising you have outgrown an academic mentor).

One story explicitly interrogated the 'rackety' mentor-mentee domain: Morris grapples with the need to change mentors due to a clash of epistemological worldviews. This was due to changes in the focus and direction of his study, and points to the need for flexibility in the worldviews of professional practice mentors. It also demonstrates a learner's need for active agency. 'One day a taniwha' uses the implicitness of parable. It allegorises a 'rackety' dilemma as a generic (but female) monster which might stand for a "heart-stopping" disruptive person, action or an event within a usually still environment. Imagery of nature misshapen becomes that of harmony restored through the collectivity of "wise ones" and "forebears" and reflectivity on a moment of crisis leading to fresh understanding and a settling of guarded waters. The allegorical reference to "the Cerulean void" suggests an unexpected and intense break in the maelstrom. Importantly, the impact of the disruption is visceral as well as critical. Morris's dilemma and 'One day a taniwha' can be read as narratives or pūrākau spanning the ethical gaps of the dominant literature in that they indicate both a deeply unsettling moment and peace that comes from trusting the self and the collective. In both, we see an affirmation of Kotahitanga, a new unity, a vision for collaborative learning.

'One day a taniwha' and Morris's dilemma aside, most of the dilemmas are not thorny. Conrad and Tremain, interestingly, all touch on the theme of self-discipline; Avatar, Carla, Alison and Eva on methodological pivots. Rosie's is more existential, pointing to the need for a life beyond the doctoral space as shown by the third person voice, an alternative identity to that of the learner/researcher. All narratives, however, are testament to experiential and transformational research in action, and of critical incidents and pivots in play. There is a sense in the narratives that professional practice affords flexibility and creative space that would not usually be found in traditional doctorate pathways.

LIMITATIONS

The fact that the enquiry was structured around a dilemma/solution orientation framed the exercise as one of positivity rather than complexity. Further, the location of the exercise within a community of practice involving mentors makes it unlikely that issues of mentoring style or fit would arise, and the same may be true of issues of institutional and administrative dilemma. Also excluded were issues related to assessment, largely owing to most learners not having reached destination yet. There are almost certainly thorns on the final leg of the steeplechase to completion. While the narrative methodology affords some focused detail, it does not give, or aim to, a 360-degree purview of the phenomenon of dilemmas in doctoral journeys.

CONCLUSION

While it is encouraging to see doctoral learners thinking on their feet and discovering solutions to dilemmas, there remains the sense that there is much left unsaid within "the Cerulean void," pointing to future research with a different methodological approach and with a less intimate site of sampling and data collection.

It is clear that the key reflective frameworks of experiential, transformational and critical moment theory apply to the Doctor of Professional Practice journey, and it would seem that the journey, at present and based on

seven of this set of nine narratives, is less of a rackety bridge than expected, but, like mentoring itself, resembles an "especially delicate dance" (Johnson-Bailey & Cervero, 2004, p. 7). This observation could be due to the sound pedagogical grounding of the programme, the system of mentor support built into its delivery, or to the nature of the experienced professionals who undertake this doctoral study.

It will be interesting to examine, at a future time, reflections on the examination process and on the final hurdles of the steeplechase. The identities of the doctoral narrators presented are accommodating, self-aware, flexible and resilient, all factors desired in the programme's candidate selection process. Further, all stories seem written in light of the COVID era's emphasis on research pivots as being a part of the journey, a pot-hole along the way rather than a diversion or a stop sign. If these are self-fulfilling prophecies, at least they are promising ones.

Martin Andrew operates as a creative mentor in postgraduate programmes, including Master and Doctorate degrees in Professional Practice. Prior to his four to five years supporting the College of Work Based Learning in Otago, New Zealand, he had sojourned away from his hometown of Ōtepoti/Dunedin with two honorary posts at Melbourne universities in Creative Industries and Transnational Education (TNE). His work and research have become increasingly focussed on doctorate education and supporting learners to reach their own personal best through critically reflective practice and writing. A transdisciplinarian, he emphasises that his past disciplines have included Education, Drama, Linguistics and Writing, Creative and otherwise. He holds honorary positions in Australia, Vietnam and Indonesia.

https://orcid.org/0000-0002-0108-5195

Anne Alkema is an independent researcher and evaluator who works mainly in the field of adult education. She has also undertaken work in the health, transport, emergency and volunteer sectors. Anne has completed the Doctorate of Professional Practice which she undertook as a form of continuing professional development and learnt more about herself as a professional researcher than she ever anticipated!

https://orcid.org/0000-0003-2440-7019

Sandy Geyer is both an entrepreneurial leader and practitioner in the area of business leadership and entrepreneurial leadership preparation. Based in Auckland, she is currently undergoing her Doctorate of Professional Practice at Capable NZ, which aims to better prepare future entrepreneurs for effective entrepreneurial leadership, earlier in their education.

https://orcid.org/ 0000-0003-0112-2301

Claire Goode is a member of the Learning & Teaching Development team at Otago Polytechnic. She works alongside academic staff across the Polytechnic to build their capabilities in multiple aspects of pedagogical practice. This role brings together skills, knowledge, and practice acquired throughout more than twenty-four years in education, in different contexts and countries. She completed her Doctorate of Professional Practice in 2021.

https://orcid.org/0000-0002-2255-6523

Steve Henry is a learning facilitator at Capable NZ at Otago Polytechnic's College of Work Based Learning. He is acting programme lead for the Bachelor of Leadership for Change and facilitates in the professional practice suite. His doctoral research is focused on learner transformation in formal vocational education.

https://orcid.org/0000-0002-4903-7213

Vicki Rangitautehanga Murray is a tutor, providing mentoring, cultural training and tangata whenua supervision to clinicians working with therapeutic communities of practice in rehabilitation facilities. Vicki is also a director, board member, trustee and committee member for her iwi, ahu whenua trusts and marae. Her doctoral research will consider Māori instruments of practice as guides to inspire Māori leadership to thrive in times of dynamic change.

Rob Nelson trained as a printer, worked his way into management, later qualifying in management and then leadership as an adult student. He then embarked on a second career teaching management, and has significant experience in collaborative project-based learning.

Bonnie Robinson is a student of the Doctor of Professional Practice at Capable NZ Otago Polytechnic. Her area of study focusses on support leaders of social justice around values-based decision-making. Bonnie has many years' experience working in the non-profit social service sector. Currently she is the CEO of a non-profit provider of services for vulnerable older people.

Jeremy Taylor returned to New Zealand in 2017 after a successful offshore career in international education and business. Jeremy was formerly the Director for Staff Development for Overseas Education Investment Management (OEIM) and was based in Chengdu, China. One of Jeremy's key responsibilities was developing both academic and administration. Jeremy also gained considerable external workplace facilitation experience as Jeremy worked with a diverse range of corporate clients and assisted them to improve their workplace capabilities. Jeremy has worked for Capable NZ since 2018 and facilitates on both undergraduate and postgraduate programmes. His current research interests include Reflective Practice and Transnational Education.

https://orcid.org/0000-0003-1194-9329

REFERENCES

Abrams, M. H. (1953). *The mirror and the lamp.* Oxford University Press.

Andrew, M., & Razoumova, O. (2019). 'Learning on my feet': The learning value of a structured TESOL practicum portfolio, *TESOLANZ Journal, 27,* 44–60.

Bogart, L. (1962). The researcher's dilemma. *Journal of Marketing, 26*(1), 6–11. https://doi.org/10.2307/1249624

Bandura, A. (1986). *Social foundations of thoughts and action.* Prentice-Hall.

Barnett, R. (2000). University knowledge in an age of supercomplexity. *Higher Education, 40,* 409–422.

Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development, 23*(3), 247–260.

Bitzer, E., & van den Burgh, S. (2014). Doctoral identity change towards researcher autonomy during research journeys across disciplines. *South African Journal of Higher Education, 28*(3), 1047–1068.

Braun, V., & Clarke, V. (2022). *Thematic analysis.* Sage.

Chang, H., Ngunjiri, F., & Hernandez, K-A. C. (2013). *Collaborative autoethnography.* Routledge.

Connor, M., Müller, B., Mann, S., & Andrew, M. (2021). Pivots, pirouettes and practicalities: Actions and reactions of work-integrated learning practitioners. *Journal of University Teaching & Learning Practice, 18*(5), 2–19. https://ro.uow.edu.au/jutlp/vol18/iss5/2

Davison, J. (2004). Dilemmas in research: Issues of vulnerability and disempowerment for the social worker/researcher, *Journal of Social Work Practice, 18*(3), 379–393.

Dewey, J. (1944). *Democracy and education.* Free Press. (Original work published 1916).

Grant, B. M. (1999). Walking on a rackety bridge: Mapping supervision. HERDSA Annual International Conference, Melbourne, 12–15 July, 1–11.

Hernandez, K-A. C., Chang, H., & Ngunjiri, F. (2017). Collaborative autoethnography as multivocal, relational, and democratic research: Opportunities, challenges, and aspirations. *Auto/Biography Studies, 32*(2), 251–254. https://doi.org/10.1080/08989575.2017.1288892

Johnson-Bailey, J., & Cervero, R. M. (2004). Mentoring in black and white: The intricacies of cross-cultural mentoring. *Mentoring & Tutoring: Partnership in Learning, 12*(1), 7–12.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Prentice-Hall.

Manathunga, C. (2007). Supervision as mentoring: The role of power and boundary crossing. *Studies in Continuing Education, 29*(2), 207–221.

Mann, K., Gordon, J., & MacLeod, A. (2009). Reflection and reflective practice in health professions education: A systematic review. *Advances in Health Science Education, 14,* 595–621.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* Jossey Bass.

Ngozwana, N. (2018). Ethical dilemmas in qualitative research methodology: Researchers' reflections. *International Journal of Educational Methodology, 4*(1), 19–28.

Reid, A. M., Brown, J. M., Smith, J. M., Cope, A. C., & Jamieson, S. (2018). Ethical dilemmas and reflexivity in qualitative research. *Perspectives on Medical Education, 7,* 69–75. https://doi.org/10.1007/s40037-018-0412-2

Richardson, L., & St. Pierre, E. A. (2005). Writing a method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 959–978). SAGE.

Royal, T. A. C. (2007). The purpose of education: Perspectives arising from *Mātauranga Māori: A discussion.* Ministry of Education.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* Basic Books.

Smith, P. R. (2018). Collecting sufficient evidence when conducting a case study. *The Qualitative Report, 23*(5), 1054–1048. https://doi.org/10.46743/2160-3715/2018.3188

Toyosaki, S., Pensoneau-Conway, S. L., Wendt, N. A., & Leathers, K. (2009). Community autoethnography. Compiling the personal and resituating whiteness. *Cultural Studies <=> Critical Methodologies, 9,* 56–83. https://doi.org/10.1177/1532708608321498

Tripp, D. (1993). *Critical incidents in teaching: Developing professional judgment.* Routledge.

Wenger, E. (1998). *Communities of practice.* Cambridge University Press.

Woolsey, L. K. (1986). The critical incident technique: An innovative qualitative method of research. *Canadian Journal of Counselling and Psychotherapy, 20*(4), 242–254. https://cjc-rcc.ucalgary.ca/article/view/59733

doi.org/10.34074/scop.6003005

REFLECTIONS ON THE VALUE OF A LEARNER FORUM IN A MASTER OF PROFESSIONAL PRACTICE PROGRAMME

Steve Henry, Ana Rangi, Deane Patterson, Karen Hocking, Rebbecca Page and Steve Jennings

INTRODUCTION

The Master of Professional Practice (MProfPrac or MPP) is a programme based at CapableNZ in the College of Work Based Learning at Otago Polytechnic, New Zealand. The MPP has been delivered since 2012 to individuals who customise the programme to their workplace and carry out research into a chosen area of practice unique to them. The MPP takes 18 months full-time (up to 36 months part-time) across three phases: a review of learning (2 months), the development of a work based research project (6 months), and the delivery of that project (10 months). Each learner has two mentors to support their programme which is positioned in an autoethnographic methodology and has practice transformation as a goal (Otago Polytechnic, 2021).

The programme has predominately been delivered to individuals in isolation from their mentors. In 2017, an online learners forum was piloted to offer a social setting for learning to occur in and the results were encouraging (Henry, 2019). Since then, there have been increasing numbers of learners attending with up to 20 different learners in 2021 and an average of five people attending each forum, held fortnightly. By 2022 ten people are attending each fortnight.

The purpose of the forums as stated in the course handbook (Otago Polytecnic, 2021) is:

- For learners to share their enquiry with peers, so they gain new insights and perspective to their own learning.
- To bring different perspectives to professional and research development.
- For participants to feedback to each other what they notice about what they see in each other's articulation of their work.

The underlying methodology of the MPP is autoethnography (Otago Polytechnic 2021). Autoethnography has been defined as an approach to research and writing that seeks to describe and systematically analyse (graphy) personal experience (auto) in order to understand cultural experience (ethno) (Ellis et al., 2010). The context for the MPP is a work-based setting, so the changing professional identity in the workplace is an important component in the MPP. The observations of our facilitators at CapableNZ have indicated that professional identity is transformed during the course of the learners' study, and this study extends this perception to explore in greater depth what the learners have experienced (Carpenter & Ker, 2017).

HOW THIS PAPER IS STRUCTURED

All 2021 forum participants were invited to participate in the preparation of this paper as an author or someone who commented anonymously. In this paper, the Roman text is constructed by the authors. Each author has contributed their reflections on the value of the forum below. Other learner voices who preferred to be

anonymous are in italics. The facilitator then shares his perspective of the value of the forum, followed by a discussion and recommendations for the future. All learner voices in this paper are from learners in full-time professional roles.

LEARNER VOICES ON THE FORUM'S VALUE

Ana Rangi:

> I have only attended a few of these but found them beneficial – mainly as a confidence boost and reminder to think really openly about real learning and my own professional practice and development. Working in a university environment I am used to the traditional, formal trappings of academia. High level qualifications (and all they involve) are standard for academics so it's hard not to feel a sense of imposter syndrome when I personally question the real 'value' of some qualifications to professional effectiveness. I have always appreciated CapableNZ's free-er approach that holistically centres you as a practitioner within your context, and values research relevance and its active application to make a difference. While we still work through the traditional skill areas for master's research (lit review, ethics etc.) I don't feel daunted by the technical aspects and process but I'm thinking all the time about my own learning – WHAT I'm learning, HOW I'm learning, and WHY…
>
> Joining the forum allows us to share progress and thoughts with whoever turns up, at whatever stage. We share challenges and are challenged in response. Considering different views and perspectives, we learn from others yet keep self-reflection to the fore. I appreciate the various places (literally and figuratively) we share from in our professional journey and 'walks of life' as individuals. Our conversation reminds me that in an 'iterative process' not everything has an obvious 'purpose,' not to limit my thinking, and to have more confidence. Every forum creates an energy and I always leave feeling more inspired. My mind feels more open to real learning now than it has for a long time.

Deane Patterson:

> One can research, theorise, and postulate on paper to their heart's content. But when you must look a roomful (or screenful) of your peers in the eyes, you become keenly aware that you can only speak what you truly believe and think you can prove.
>
> The learner forum is a truth seeker. An 'imposter syndrome' detector. A proving ground. A place where your convictions must face reality and the learner, in turn, must test what they really have the courage to share with people who are willing to (however gently) challenge assumptions and biases.
>
> This forum is vital for reality to be included in a learner's arguments and conclusions. If you can't or won't share it with your peers in a learner forum, is it true to you?

Rebbecca Page:

> I have been an avid learner for most of my adult life, and this is one of the few times I have had access to a space where I have felt that it was perfectly okay to bring my authentic self to a forum. However I arrived on the day in terms of my MPP journey – ducks in row, or herding cats – was accepted, and welcomed. I found that not only was there support, but more than that, there was space to be vulnerable in what sometimes felt like failure. This has all formed part of a fantastic transformational learning process.

Karen Hocking:

Working full time, self-directed study, attempting to manoeuvre round Moodle, research engines and the narrative in my mind that I am not academic made the first part of my MPP journey a bit overwhelming. There were times I said, I should have just done paint by numbers like my other colleagues and get the work thrown at me.

Being told about the Learners' Forum by the admin team ('cause I would have never found it in Moodle) and making time to join has reminded me what I love about learning with CapableNZ. The Learner Forum is structured in such a way that it allows you to say hi, listen and reflect. Equally participate in a way which really helps you with those blockers and sharing successes. I love the way you can join at any time of your MPP journey, everyone is at different levels, it's what makes it so dynamic. Who needs to go and sit in classes and get material produced for the masses thrown at you. We have a group full of amazing people who are doing their MPPs on so many interesting and diverse subjects.

Steve Jennings:

The MPP Forum has afforded an opportunity to connect with other learners and an opportunity to hear about the different stages of everybody's learning journey. Sharing this journey of new learning with others, especially many years beyond the typical schooling period in my life instils a sense of comfort, and whilst there are obvious benefits of connecting with new people from highly varied backgrounds such as the exposure to different perspectives and industries, the thing that I take the most away from these sessions is the honest vulnerability, this thing that we often paint a mask over in our professional lives which when discussed triggers the reconnection that all of us are still people, imperfectly perfect.

Other learner comments:

The forum has been the most helpful and transformative learning environment I have encountered. In the forum, each participant has rapidly developed confidence and contributes deeply from our respective knowledges collectively weaving a fine basket that in turn enhances our individual baskets. This means I bring more of myself and can observe the effect of this in the exponential trajectory of development in how I consider my research/ future analysis and description of that, and as a practitioner in my profession of three decades.

Being inspired, fortified and encouraged. Feeling a sense of shared community; of thinking of practice and of companionship.

The Forums have given me a sense of community and peer connection – honest and open communication about the trials, tribulations, insights, and excites of my MPP journey.

The MPP forum is a wonderfully rich and complex environment to be lost and found in the inter-relationships between people, ideas and knowledge. It encourages and celebrates the sharing of stories, analogies and metaphors. In this spirit, it challenged me to ask myself: what thoughts are flourishing, which are composting, which are just budding and which are ripe for harvesting into my practice? It is a collaboration that allows us to hold our thoughts out; to give us room to learn from each other, to shift perspectives, humbly and gratefully.

I found the connection with other forum members grew as we went through; not just the commonalities but the differences too. I can return to my new draft for my MProfPrac review of learning with a new insight into why I struggled with the first draft.

FACILITATOR REFLECTIONS ON THE FORUM

Steve Henry:

Every MPP learner is grappling with complexity; their workplace, their chosen enquiry and the unspoken terror of having the agency to customise their Master's degree to serve them. This can become overwhelming. Everyone deals with the overwhelm differently. Sharing this overwhelm liberates someone from their echo chamber. To say "I don't know" becomes grounding. A place to move from. To witness others in their authenticity seems to lead to the courage to share. Coupled to this, learners have a dilemma, which is largely unspoken; they have more agency than they have ever had in a formal learning programme before. The curriculum is constructed by them with the support of mentors. This dilemma is "disorientating" and opens the possibility of what used to be taken for granted being challenged. When critical reflection and rational dialogue is added to this dilemma, there is potency for transformational perspective shift (Mezirow, 2000). There is something about saying your work out loud to others which changes it. It becomes different to how it is said in the mind. If the dialogue is not rational then it may include deep unconscious patterns (Dirkx et al., 2006). It is these patterns that appear to be coming to the surface from the learners' voices above – surprise and delight that such patterns have legitimacy in a Master's level programme.

From its commencement in 2019, the forums have had a clear structure of a circling method to facilitate the forum. Participants are always invited to share what is alive in our MPP right now? Someone shares and then optional feedback is given using a firm structure, known as the Circling method (Sengstock & Cotton, 2022). After someone shares, others can say what they notice, what they imagine and how they feel about it. These three steps enable the subtle to be honoured (I notice you relaxed as you shared, like a weight was removed). Being able to name what is being projected as a response, is liberating, connecting and increases vulnerability because it carries some risk (I imagine it's relieving to say how stuck you are at this time). To then say how you feel means the observer declares what they are in response to this. They have skin in the game. (I feel sad you are stuck). After such feedback the person who shared begins their response with "On hearing that … ." This method allows what is being said behind the words to be given voice and the result is often surprising. Even if an observer imposes their projection on someone then this is easily corrected. As this method is used more participants get more courageous to say what they really observe and imagine is going on.

The forum is designed to be transformational for participants. It aligns to the four components of transformational learning facilitation outlined by Apte (2009) which are confirming and interrupting current frames of reference, working with triggers for transformative learning, acknowledging a time of retreat or dormancy, and developing the new perspective. All participants in the forum have without exception felt relieved to have the permission to have one of these aspects deconstructed while being witnessed.

DISCUSSION

The voices point to multiple layers of value. Being witnessed by peers who have some idea of what each person is going through has value. Learners are navigating complexity as they attempt to articulate their practice. Most who complete the MPP are doing deep change work in complex social settings. Such change is hard and often marginalising. The forum design seeks to make watching from the edges acceptable and safe (Henry, 2019). It is a place where inclusion is front and centre, no matter what someone brings – bringing your attention is enough. It is therapeutic to be witnessed by others who can relate. Those who are marginalised, watch from the edges, often feeling belittled, othered, and/or alienated (Berryman et al., 2015). Building a culture of welcoming everything is key to inclusion.

The forum has never involved meeting people physically as all the forums have been held online on Zoom or Teams. Meyers (2008) suggests online courses can effectively use transformative pedagogy, including (1) creating a safe environment; (2) encouraging students to think about their experiences, beliefs, and biases; (3) using teaching strategies that promote student engagement and participation; (4) posing real-world problems that address societal inequalities; and (5) helping students implement action-oriented solutions. All of this happens to varying degrees.

As well as perspective change for participants, there is an aspect of sharing. Nohl (2009) identified the importance of "social recognition" – the recognition of acknowledgement and appreciation as critical for transformative learning to take place. Not knowing what will happen in each forum gives a sense of ease to allow different to usual directions of enquiry to emerge. Spontaneous action may play a decisive role in transformative learning (Nohl, 2009). Throw-away or glib comments may be noticed and brought to the attention of the speaker who sees them in a new light. Unconscious patterns become more visible this way. Participants are not pressured to share, rather they participate on the periphery (Lave & Wenger, 1991) until they are ready to step in further.

Participants at the forum can get emotional – and when they do, it is welcomed. Emotions also are inherently linked to critical reflection, because "purely objective reasoning cannot determine what to notice, what to attend to, and what to inquire about" (Van Woerkom, 2010, p. 248). Enabling such reflection is the intent of the design of the MPP and the forum.

Forum participants become increasingly empathetic to each other the more time they spend in the forum. Stuckey et al. (2013) suggest scholars have overlooked the role empathy plays in engaging the emotive nature of transformative learning. MPP learners care immensely about the context they are in and the change they seek – yet they are asked to deconstruct and reconstruct something they might discover is different to what they expected. Seeing others do this in the forum is a relief as they can see their own pattern expressed in another. It is empathy that provides the learner with the ability to identify with the perspectives of others, lessens the likelihood of prejudgment, increases the opportunity for identifying shared understanding, and facilitates critical reflection through the emotive valence of assumptions (Stuckey et al., 2013).

The forum meets the critieria for fostering transformational learning design in an educational setting, outlined by Taylor and Jarecke (2011), placed in relation to the core elements of critical reflection, group dialogue, individual experience and an awareness of context:

- a purposeful and heuristic process
- confronting power
- engaging difference
- an imaginative process
- leading learners to the edge
- fostering reflection, and
- modelling.

Being stuck when undergoing complex learning requires a range of methods to support movement. The forum is one such vehicle. Schnepfleitner and Ferreira (2021) eloquently summarise the dilemma:

> Perhaps without realising it, we are all trapped within and moulded by our meaning perspectives and therefore we can never make an interpretation of our individual experience free from bias. It is only by exposing our ideas or experiences to critical reflection and dialogue and comparing them to the lived experiences of others that we can begin to uncover those biases or reassure ourselves of their objectivity.

With 75 learners in the MPP programme, there is potential for more participation in a forum that appears to have significant value for those who participate.

Steve Henry is a facilitator for the College of Work Based Learning at Otago Polytechnic, Te Pūkenga, based in Motueka, Tasman.

Ana Rangi is a Professional Practice Fellow in Health Sciences at the University of Otago based in Ōtepōti, Dunedin.

Deane Patterson is a composer and musician for film and television, based in Ōtepōti, South Dunedin.

Karen Hocking is Group General Manager Housing for the Ministry of Social Development for the NZ Government, and is based in Te Whanganui-a-Tara, Wellington.

Rebbecca Page is Manager Sustainability for NZ Police based in Te Whanganui-a-Tara, Wellington.

Steve Jennings is a Technology and Innovation Manager for JBWere New Zealand, based in Tāmaki Makaurau, Auckland.

REFERENCES

Apte, J. (2009). Facilitating transformative learning: A framework for practice. *Australian Journal of Adult Learning, 49*(1), 169–189.

Berryman, M., Nevin, A., SooHoo, S., & Ford, T. (Eds.). (2015). *Relational and responsive inclusion: Contexts for becoming and belonging.* Peter Lang Publishers.

Carpenter, C. & Ker, G. (2017). Learning from experience: Exploring professional identity growth through work based learning processes. *Scope: Contemporary Research Topics (Flexible Learning), 2,* 22–32.

Dirkx, J. M., Mezirow, J., & Cranton, P. (2006). Musings and reflections on the meaning, context, and process of transformative learning: A dialogue between John M. Dirkx and Jack Mezirow. *Journal of Transformative Education, 4*(2),123–139. https://doi.org/10.1177/1541344606287503

Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An overview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 12*(1), 1589. https://doi.org/10.17169/fqs-12.1.1589

Henry, S. (2019). Banding together: A work in progress forum for learners, alumni and staff. *Scope: Contemporary Research Topics (Flexible Learning), 5,* 87–88.

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

Meyers, S. A. (2008). Using transformative pedagogy when teaching online. *College Teaching, 56*(4), 219224. http://doi.org/10.3200/CTCH.56.4.219-224

Mezirow, J. (2000). Learning to think like an adult. Core concepts of transformation theory. In J. Mezirow & Associates, *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3–34). Jossey-Bass.

Nohl, A. M. (2009). Spontaneous action and transformative learning: Empirical investigations and pragmatist reflections. *Educational Philosophy and Theory, 41*(3), 287–306. https://doi.org/10.1111/j.1469-5812.2008.00417.x

Otago Polytechnic. (2021). *Masters in Professional Practice Handbook.*

Schnepfleitner, F. M. & Ferreira, M. P. (2021). Transformative learning theory – is it time to add a fourth core element? *Journal of Educational Studies and Multidisciplinary Approaches (JESMA), 1*(1), 40–49. https://doi.org/10.51383/jesma.2021.9

Sengstock, G. & Cotton, J. (2022). *What is the circling method?* Circling Institute. https://circlinginstitute.com/what-is-circling-method/

Stuckey, H. L., Taylor, E. W., & Cranton, P. (2013). Developing a survey of transformative learning outcomes and processes based on theoretical principles. *Journal of Transformative Education, 11*(4), 211–228. https://doi.org/10.1177/1541344614540335

Taylor, E. W. & Jarecke, J. (2011). Looking forward by looking back: Reflections on the practice of transformative learning. In J. Mezirow & E. W. Taylor (Eds.), *Transformative Learning in Practice: Insights from Community, Workplace, and Higher Education* (pp. 275–290). John Wiley & Sons.

Van Woerkom, M. (2010). Critical reflection as a rationalistic ideal. *Adult Education Quarterly, 60*(4), 248. https://doi.org/10.1177/0741713609358446

doi.org/10.34074/scop.6003008

PRINCIPLES FOR EDUCATIONAL INNOVATION – A DEVELOPMENTAL EVALUATION PERSPECTIVE

Samuel Mann and Margy-Jean Malcolm

INTRODUCTION

In times of change, there are many calls for educational innovation. Often these calls go beyond the specifics of a particular industry need (à la "we need graduates with a diploma in network engineering") to calls for broader transformational and societal goals. Te Pūkenga is posing such transformational goals:

> Right now, we have a once-in-a-generation opportunity to redesign how we deliver education and training across Aotearoa … [and] if we are truly to put our learners at the centre, a full transformational programme development may be required to unify programmes. (Te Pūkenga, n.d.)

Clearly, the development of new or transformed educational programmes needs to take innovative approaches, but it is not clear how one should go about developing such potentially transformative programmes. Educational development tools such as curriculum alignment (Anderson, 2002) presume a stable environment of work and tightly definable graduate profile statements that permit entry to an established profession. Such approaches have little room for concepts such as sovereignty or learner self-determination, nor the current environment of dynamic complexities into which graduates will enter. This article aims to contribute insights from our innovation experience to support greater understanding of how one might go about developing a transformative educational programme. It was an emergent approach, not a predetermined pathway, but also not a "work around" which suggests avoiding challenges; rather, we saw those challenges as opportunities.

METHOD

This article takes an autoethnographic approach. A case study forms the basis for the narrative: the early development of the Bachelor of Leadership for Change (BLfC). (See Mann et al., 2017a, 2017b for a more formal description of the qualification.) The narrative is in the first person, reconstructed from the notes of the first author. We then use a Developmental Evaluation mindset (Patton, 2010) as a framework to highlight some key insights from the narrative.

The Bachelor of Leadership for Change was formally developed in early 2017, with approval to teach coming in late 2017. To focus on the precursors – the conditions for innovation – we start the story in 2016.

Handwritten figures are provided directly from the notes of the first author. The intention of including these is not to provide specifics, but to give a sense of the dynamic, evolving and collaborative nature of the development. We make no claims in this section as to novelty, rather we aim to provide a summarised narrative of the development as it happened. Unless otherwise indicated, all quotes are from notes.

INNOVATION AS USUAL

In 2016, I had just moved from the School of Information Technology where I ran the capstone projects and had led, in 2014, the national redevelopment of all sub-degree national computing programmes within tight external constraints including industry specification of restrictive job-roles for every qualification. I had been involved in the development of the Doctor of Professional Practice (DPP) since about 2012. The DPP would complement the Master of Professional Practice (MPP) and our undergraduate programmes – which have since become known as the Independent Learning Pathways (ILP) within Capable NZ. We always intended that there would be a Bachelor of Professional Practice but had been defeated by the major stumbling block of a belief that you could not learn about professional practice until you had a profession in which to practice – so would be unsuitable for school leavers.

In February 2016, we developed the Capable NZ Value Set based on heutagogical principles (Mann et al., 2017a, Figure 1). We were visited by the Productivity Commission who were researching a report on the future of work and education. They challenged us with the questions of "if we could develop our own success measures, what would they be?" and "given a free hand to develop new models, what would we do?" These thought-experiments were matched by the challenge of developing an ICT Graduate School: a collaboration of five tertiary institutions where the mission for development was to transform the IT industry through new approaches to IT graduate education but within constrained parameters – we could not change the funding model for instance. At the same time, Otago Polytechnic revisited its commitment to sustainable practice, reaffirming the commitment that "every graduate may think and act as a sustainable practitioner" (Mann, 2011) and eventually expanding this to a vision of "our people make a better world." On a teaching front, I was mentoring Glenys Ker's doctorate (Ker, 2017) that highlighted the role of engagement, empowerment and transformation potential in learners engaged in sense-making around their professional practice. I was also mentoring Master's learners, including two who described their work as "innovation as usual."

All these things came together in a goal of repositioning Capable NZ as a "Transformation Hub." The vision was groups of people coming together to solve wicked problems. The focus was on making a difference foremost, regardless of existing educational level or experience. For that, we needed a full suite of programmes, and the development opportunity was a new degree suitable for school leavers. In this we were emboldened. The draft future of work report "New Models of Tertiary Education" (New Zealand Productivity Commission, 2016), came out and then the New Zealand Qualifications Authority (NZQA) visited, both reaffirming that we needed to focus on skills for "jobs not yet invented." Other notes I made explored "imagining the future", collapsed informatics, steampunk (future the way it used to be), Liberating Voices cards 'places to be radical' and 'education as design fiction' (Schuler, 2009), and Geoff Scott's visit to talk about the role of dilemmas of professional practice and authentic assessment

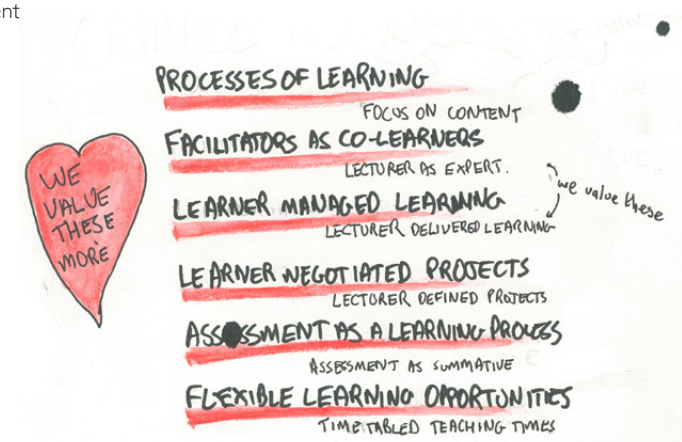


Figure 1. Capable Value Set based on heutagogical principles.

In late October 2016, I met with a graduate of the Bachelor of Information (BIT), Rimu Boddy. Rimu was a fisherman who had an idea to transform the fishing industry and saw a BIT as the way to achieve that. He was in Auckland running a rapidly expanding company and we met to discuss the potential for him taking on international IT students for their capstone project. In conversation we chatted about the Transformation Hub and how it might work for his business. In doing so we talked about his own pathway and discussed how he had realised that the BIT was not what he needed, rather a bit of international relations, marketing, business management, design, and enough IT to talk with the coders, and to do it all using the example of his own entrepreneurial innovation. Lamenting that there was not a suitable programme we joked, "Rimu didn't need a BIT, what he needed was a Bachelor of Rimu."

Two days later my notes show the first meeting titled "Bachelor of Making a Difference" (BMaD). The "B.Rimu" was the motivating example and we quickly moved on to identifying other "Rimus" – Nicky, Oliver, and Joe. During November, we talked to anyone we could find who either was a "Rimu" or knew of one – and seemingly everyone knew someone with a similarly unique story – so by the end of November we had eight personas characterising people who might benefit from designing their own degree. These personas became fundamental to our development process, our inspiration and our crash test dummies. While the real people the personas represented had all moved beyond the stage where they might need a BMaD, we were developing for the very real need they represented. We were taking the demand for change and making it real.

On 31 October 2016, my notes pose a question that became fundamental to the development: "how to design a course that deliberately stays on left of the innovation/hype cycle? (Figure 2).

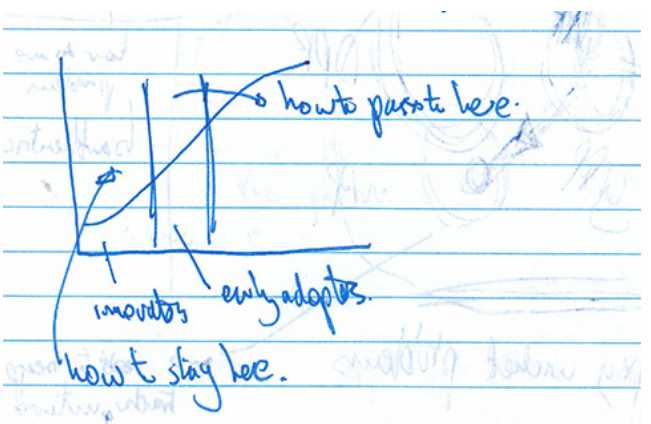


Figure 2. Purposefully designed to stay on the left of the hype curve.

During November, we had pulled together many of the drivers that we had been exploring for several months; we knew the degree had to be deeply experiential, have a strong theme of identity (including starting with who am I, whakapapa, and what do I believe?), be directly applied to practice (both the learners' own change goal and an internship or placement), have a strong element of transferable capability, and it had to be clearly stamped with "we make a difference."

We revisited the discarded Bachelor of Professional Practice and realised that the BMaD was professional practice, the difference being that we are providing a platform for emergent professional practice. We came to see the degree as having a different concept of practice, that the degree would develop a desired practice pathway (rather than the predetermined pathway of taught programmes or the established practice pathway of ILP).

We also recognised that that while desired pathways could be emergent pathways – and possibly post-discipline – they should also cater for small disciplines (for example, museum curators). Further, learners might have a strong idea of what they wanted to address (for example, homelessness) but little idea of the mechanisms available (for example, social entrepreneurship) or vice versa. This led to an individually curated set of experiences for each learner from which to harvest learning as they worked out their own path.

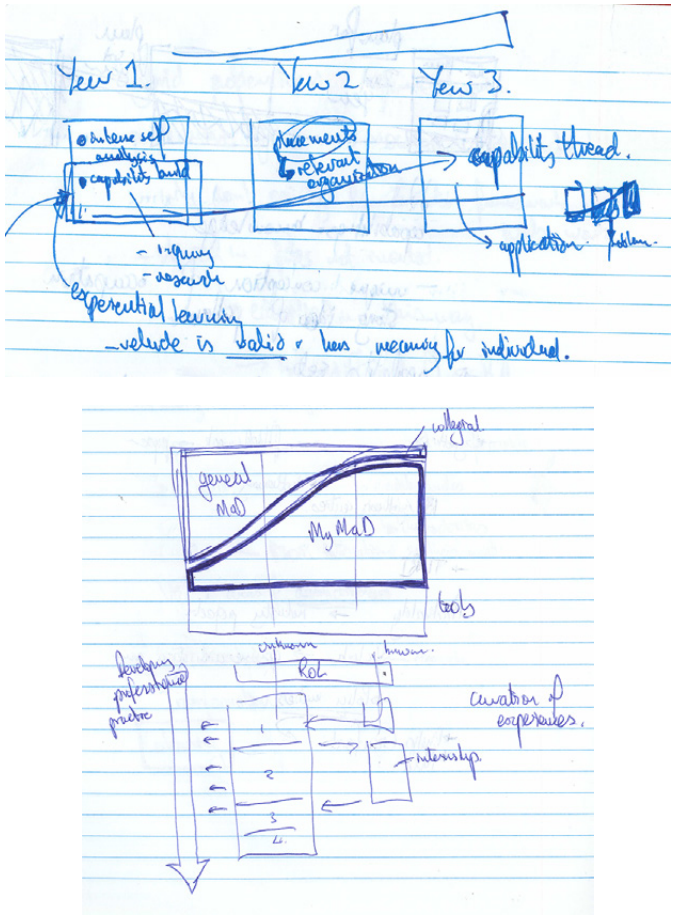


Figure 3. Two of the first diagrams of a three-year degree.

The first diagrams of a coherent programme emerged (Figure 3) in late November. But rather than progressing from here to finer-scale structure, we deliberately did not do that. Instead, we focussed on the principles, both how we were doing the development and principles for the degree: self-determined, learning from unexpected places, and transformational. This has remained the point of difference for the degree; it is more about the processes of learning than about content and structure.

Not having a single industry to satisfy, or disciplinary accreditation rules to follow, a feature of this development was discussions with a very wide range of people, mostly opportunistic. And the fingerprints of these people can be seen in the degree: Robert Costanza talked about societal therapy and the positive transformation needed for wicked problems; Bob Huish talked of the imperative for "activist education" and Birgit Penzenstadler the

activist positioning of disciplines; Dominique Hes introduced regeneration; Jo Thompson the transformative steps between caring and action; and Ray Maher communication systems for environmental innovation and social transitions. We saw a commonality with this otherwise disparate group in that they all talked about frameworks for living with complexity. The importance of frameworks aligned with concurrent work we were doing in developing resources for the DPP – a practitioner canvas provided a vehicle for exploring professional frameworks of practice, and Geoff Scott visited again to talk about incorporating competency and capability frameworks. Geoff also talked about powerful assessments (Scott, 2016) and we adopted a design goal of "no pointless essays." The significance of all these discussions is not the particular people – they were mostly opportunistic conversations tagged onto other discussions – nor the particular observations. What matters here is that we had wide ranging discussions with a diverse group and we were alert to insights.

Notes from a January 2017 meeting with the Otago Polytechnic Chief Executive Phil Ker have several statements that we needed to test: "For us, knowledge is enabler, not objective"; "Learner provides knowledge construct, we focus on capability (cf. knowledge focus in degree regulations)." He also described an "axis flip to interdisciplinary degrees": these three statements were useful for us in framing our approach and communication.

In response to one of our colleagues describing the emerging degree as a "weapon of mass disruption," we made a deliberate decision to disrupt from within the system – a system that is predisposed to teacher-led classroom instruction of predetermined content towards predefined disciplines. We wanted to be as different as possible but not to require system changes that could become insurmountable barriers thwarting development. We took the approach that quite often questions are asked in a way that presupposed an answer: "how are you planning to achieve this educational outcome, a or b?" Our answers were more often than not, neither "a" nor "b", but "c" or "k" or "seven" or "orange" but always prefaced with the original question: "we will achieve this educational outcome by… ." This became vital as we realised the consequences of taking a complexity approach to the design. Rather than seeing a programme as a staircase of building blocks with predefined content, we saw a system of interrelationships, perspectives, boundaries and processes, particularly personal growth (Figure 4). While we knew we would eventually be required to have those conventional elements – people need courses to enrol in – during the development we steadfastly focussed on systems approaches. An analogy from software development was useful here – that of the Agile Manifesto (Beck et al., 2001) – this transformed software development in moving the emphasis from structured documentation to relationships, user stories and embracing change. Importantly, agile is no less rigorous, just that rigour takes a different form – the axis flip from structure to process – and we used that analogy repeatedly in communications.

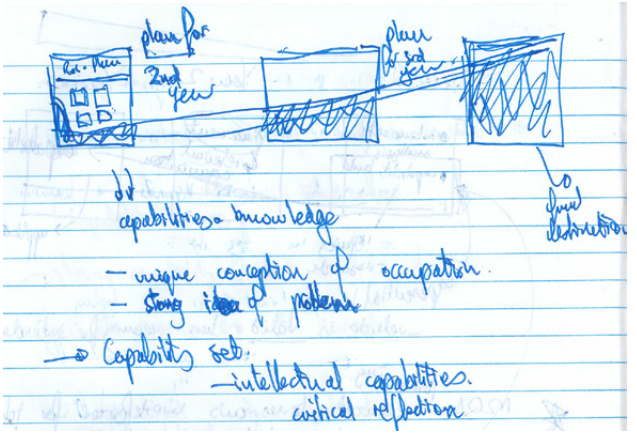


Figure 4. Early diagram of the degree as a journey. Includes review of learning at the start, a selection of experiences, increasing independence, and the importance of planning for each learner's next stage, and a "final destination" (eventually called "exit strategy").

Our next moment of inspiration was to focus on the user stories as emergent properties from the degree (characterised as the goals of the personas). In a series of conversations (mediated by a survey tool, Figure 5) we asked over 300* stakeholders to imagine futures for the personas (*note: anonymity of some aspects made precise counting impossible). We also asked if they know this "person" and who have we missed (we got seven more, Figure 6). We asked how those 'people' would define success, what might be their dream job, and what capabilities they needed for that success. The graduate profile was developed from a set of capabilities (Figure 7) distilled from those hundreds of responses. We sent the graduate profile back out to make sure our extraction had not lost the richness, robustness and flexibility. Key to the degree is that the graduate profile is an enabler for individuals to describe their own vision of success and plot a path to achieve that.

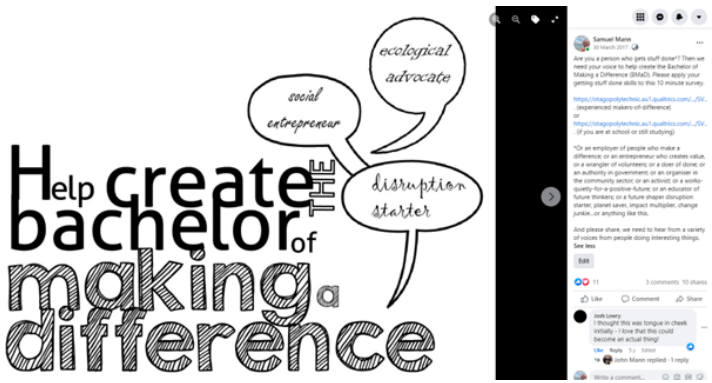
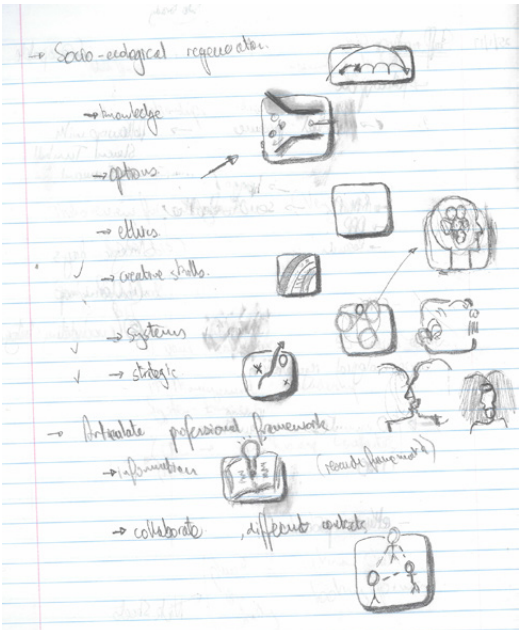


Figure 5. Social media post asking for help in defining the goals of the BMaD.

Figure 6. Final version of personas used in last round of stakeholder design. How might each of these people break the degree?



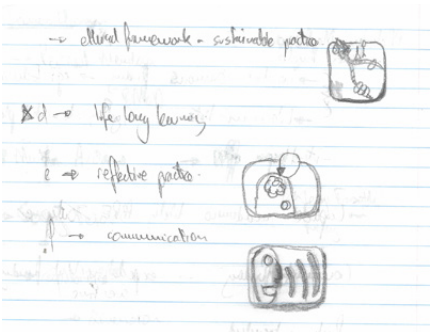
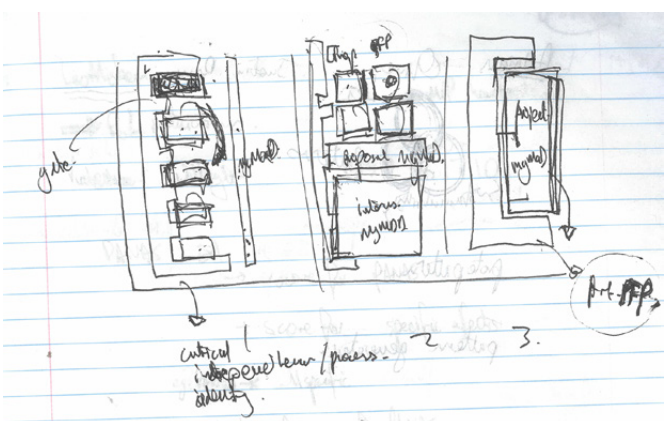
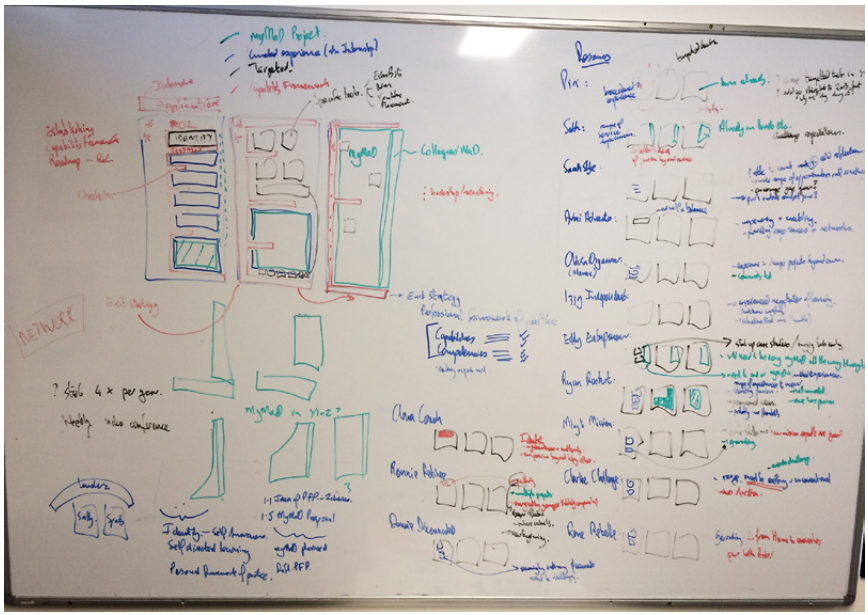


Figure 7. Capabilities from stakeholder descriptions of future personas that became the graduate profiles.

It is not the intention here to describe the details of the degree. Of note is that the internal structure for the degree did not take shape until late May 2017. This is in stark contrast to any other educational development I have been involved in that have all reached "what courses will we have in first year?" within the first development workshop. Figure 8 shows the framework structure of the degree in what we referred to as the "E" diagram – the E forming the backbone of each year – the reflection on professional practice supporting the curated experiences, the targeted projects, and the final MyMaD project. The "E" also stood for the "Exit Strategy."

When we had more idea of the structure of the degree we sent that back to the stakeholders: "how will this work for each persona?", "what risks might they face?" and then developed to respond to those risks. We imagined the personas as crash test dummies, and this approach continued to be able to provide a safe vehicle for eventual real students to explore.





Figures 8a and 8b. Developing "E" framework structure for the degree and testing that shape with persona experiences.

The second thing we did with the emergent structure was test whether we could communicate it. My notes are full of variations of the "E" diagram as again we explained it to anyone who would listen. Again, we sent this out to the wider stakeholder group with how this would work for each persona (Figure 9) along with learner-centric friendly explanations of each semester (Figure 10) and asked both "how would this enable each persona to fly?" and "how might each break the degree?" About this time, we also started working with people who would eventually undertake the degree: they genuinely wrote their own degree.

Figure 9. How might the personas break the degree? Suggestions from stakeholders.

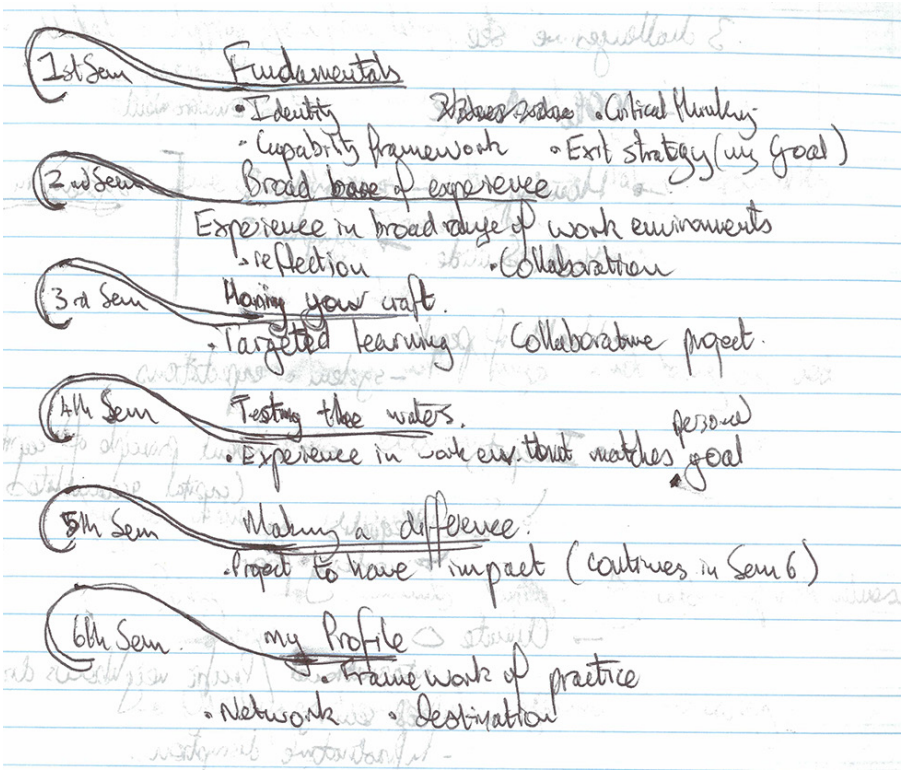


Figure 10. Developing learner-centred descriptions of semesters.

By the end of May 2017, we had principles, graduate profiles outcomes, and a structure to provide a robust yet flexible pathway. From there it was a reasonably simple curriculum alignment process to specify the learning outcomes for each course. This was not without some twists, for example, the six curated experiences were required to show progression, but we wanted them to be done in any order.

A year after the initial ideas discussed at the start of this narrative, we had enough to write the programme document. The degree was to be not just self-directed but self-determined. It was professional practice that could be undertaken by school-leavers. The coherence was to come from the individual while harnessing the benefits of a community of learners. People could start whenever suited them, forming rolling cohorts, from the model of learning within a family. There being no single industry, we appealed to the government's "future of work" initiatives. We worked out the bones of a weekly delivery plan: a combination of individual mentoring, group planning sessions, and a conversation with a guest speaker. This we took to accreditation. After intense internal academic scrutiny, the degree was accredited with a remarkably little amount of fuss by NZQA although in the process its name changed to Bachelor of Leadership for Change.

We knew that there was still much development to go in making the degree real. The challenge in teaching an individually self-determined qualification is that, by design, you are building the plane while flying it, but that is another story.

DEVELOPMENTAL EVALUATION MINDSET

This article is about the process of innovation rather than the innovation itself. In a separate article in this issue, we explore the ongoing development of the BLfC. Also, following Patton et al. (2015), it is not the intention here to examine the fidelity of the BLfC development process as a Developmental Evaluation or even a Developmental Evaluation Mindset. Rather, we use the principles of Developmental Evaluation as a sense-making device to help illuminate features of the practice of educational innovation.

While Patton (2015) was careful to preface these principles as being a mindset rather than a formula, he describes eight essential principles. Using each of these in turn as a lens, we consider the development of the BLfC.

Developmental purpose

It is worth noting that the development of BLfC did not set out to be a Developmental Evaluation and nor did it have an explicit role as "evaluator." Rather the "innovation and evaluation develop together – interwoven, interdependent, iterative, and co-created – so that the developmental evaluation becomes part of the change process" (Patton et al., 2015, p. viii). In this way, evaluation is tied to development not in terms of accountability but intrinsic to the developmental goal; the innovation is to make something better, and the evaluation makes that something better. Patton also describes types of innovation, in our case a hybrid of a new, original approach to a problem and an adaptive innovation; and while we could see elements of taught programmes, the approaches of the ILP and PP needed to come forward in our development. What makes it innovative is the degree of change compared with the existing situation and the recognition that understanding of the problem is both the first task and never ending: "the effort to tackle a complex problem may generate new/deeper insights about the nature of the challenge being addressed and/or the context" (Patton, 2015, p. 294). Key to innovations is that while there is a commitment to major change – in our case the myriad of challenges and motivations that initiated this development – the nature of that change was yet to be determined and indeed the approach to innovation is also emergent.

Goals at the outset for the development or the process would not have been useful. At the outset we were not setting out to create a new degree, rather a "Transformation Hub" which would render pointless the usual reporting milestones of so many required formal consultation sessions. Our approach was a mindset of inquiry intrinsically linked to an emerging innovation within a context that itself is unfolding.

Evaluation rigour

It might be stating the obvious, but for Patton if there is no data, there is no evaluation. The developmentally inquiring mind must have some rigorous basis. For Patton, evaluation rigour comes from rigorous evaluative thinking: "Ask probing questions, think and engage evaluatively, question assumptions, apply evaluation logic, use appropriate methods and stay empirically grounded" (2015, p. 299). In the BLfC development, this questioning was fundamental, not only to the process but to the innovation (the degree) itself. We generated a lot of questions and a lot of data.

Patton cautions "the problem, it seems to me, is in the focus on methods and procedures as the primary, or even only basis for determining quality and rigour" (p. 296). The rigour lies in "diligent, systemic situation analysis" and "principles-based evaluative thinking." This rigour comes from clarity about the purpose of the innovation and inquiry: what will inspire confidence in findings among those who will use them? In our case, the primary users of this information were ourselves as developers, and later as programme facilitators. We were asking questions we did not know the answers to and so these questions continually evolved as our own understanding deepened. As part of the integrated development and evaluation, we talked to as many people as possible, as

often as possible about the emerging degree, probably 100 or more such conversations, usually over a coffee and always with a back of the envelope. And as each person had a slightly different perspective or framed their questions differently, our own answers evolved and became the data for development.

At the start of the development (or at least once it was apparent we were developing a new degree) and at the end, we had to comply with external evaluation. At the start, the "permission to develop process" asked the wrong questions, too early, and at the end accreditation to deliver (programme document) asked the right questions but presupposed answers which did not fit our model. Neither of these steps could be considered developmental evaluation, and neither were useful beyond the desired outcome. So, we took a positive and educative approach to both.

Utilisation focus

Patton describes focussing on intended use by intended users from the beginning to end, facilitating the evaluation process to ensure utility and actual use. While Patton's focus is on the use of evaluation, in our case we can see this utilisation focus also applying to the innovation itself. The wide-ranging set of principles and precursors only become one when it coalesced under the "Bachelor of Rimu." However, we knew it was not just Rimu, and we sought input and validation from hundreds of self-described change agents, many of whom said they had once been "Rimu." They described roles that would never have occurred to us, so in terms of utilisation focus, we were explicitly designing a pathway to hundreds of jobs that we had never heard of. We were able to ground this by using the personas as both motivation and "crash test dummies." Before the structure of the degree emerged, we knew that a key thread was working towards each learner's "exit strategy": their framework of practice, their experience, their network, and what was their "plan for Monday." Regular coaching sessions were to be on progress towards this exit strategy; these sessions forming the backbone of the "E." These we tested with the personas using the "how will might they break the degree?" inputs from hundreds of contributors.

We took the somewhat elusive demand for a change to education and working backwards from "how will this be used?" to make it real. The subsequent uptake of the programme by a diverse demographic of learners (who reflected the personas well but included relatively few school leavers) showed how attractive this change to education was for many who had not had their needs met by more traditional education approaches, and how the answers to the "how will this be used?" question continued to expand.

Innovation niche

Patton et al. (2015, p. v) describe the "developmental evaluation niche" as one which:

> … focuses on evaluating innovations in complex dynamic environments because these are the types of environments in which social innovators are working. Innovation as used here is a broad framing that includes creating new approaches to intractable problems, adapting programs to changing conditions, applying effective principles to new contexts (scaling innovation), catalysing systems change, and improvising rapid responses in crisis conditions. Because social innovation unfolds in social systems that are inherently dynamic and complex, and often turbulent, social innovators typically find themselves having to adapt their interventions in the face of these system characteristics.

For the development of the BLfC we started with the wicked problems – jobs that have not yet been invented, engaging people who saw little value in conventional education, and the dynamic nature of the future of work – and we developed in a way that embraced this wickedness. It would have been relatively easy to look at a (all too often updated) list of "ten jobs of the future" and make a degree to anticipate one of these, for example,

a robo-taxi developer. But that would have been restricting, probably wrong (Vitek & Jackson, 2008), and would not have addressed any of the broader challenges about the changing face of education. Patton (2015, p. 302) stresses the difference between innovation and improvement and argues "social innovation approaches wicked problems through engagement, learning and adaptation (of process) rather than imposition of project-like solutions or models." Learning from the development of the BLfC, we can see that this applies to both the process of development and the resultant degree. Indeed, once the resultant degree was underway, there was a parallel process of innovation happening for the learners tackling wicked problems in their change projects, and for the BLfC facilitators navigating the programme processes to support them. As such, the experiential learning around innovation was embedded internally and externally, for learners and staff.

Complexity perspective

Patton's (2015) fifth principle calls for the application of complexity concepts. Here he defines complexity as referring to emergence, non-linearity, uncertainty, dynamics, and co-evolution (distinguishing these from systems thinking focussing on relationships). Recognising this complexity means that at the outset, "developing from rudimentary ideas … you cannot predict what will be the results, or even what you will be doing" (Patton, 2015, p. 305).

This complexity perspective is inherent in the development of the BLfC, again both in the process and the resultant degree. During development, we focussed on developing principles and broad outcomes, and how these might look for many different potential learners. When we did eventually turn to articulating the structure, it was clear that it had to be one that supported learning in ways that met all these characteristics of complexity. This had to work in a general sense, but also recognise and embrace the complex nature of each learner's journey. Complexity not only describes the problem but also the solution, not that the solution is complex, but neither should it impose a narrow solution to tame the complexity. Rather we need to seek elegant educational responses that allow for uncertainty, non-linearity and emergence. Complexity also requires holding inherent tensions between structure and emergence, as the delivery stages of the programme make clear (Malcolm, 2020; see also our article in this issue).

Systems thinking

In writing of Systems Thinking as a principle of a Developmental Evaluation Mindset, Patton describes a means for "conceptualising multi-dimensional influences, interrelationships and interactions as innovative processes and interventions unfold" (2015, p. 306).

Systems thinking was important in the conceptualisation of the degree and the evaluation of it as it emerged. We purposefully focussed on the emergent whole before thinking of the processes and flows to achieve that, the sub-systems, and only last, the components making up the structure. We borrowed from Agile Mindset to describe our focus on relationships, processes, stories and deliverable systems (in our case the evolving statements describing the degree). The axis-flip from structure, knowledge and content to processes, capability and relationship was fundamental in formulating the degree and as a premise to evaluate. The subsequent argument that "knowledge is an enabler, not the objective" was similarly tested, being modified with the emergent approach that there was to be some specific knowledge required – that of frameworks to help learners navigate the complexity. Even then, with few exceptions (te Tiriti o Waitangi for example), the specific frameworks were left to the appropriately guided individual learner to decide.

Co-creation

A crucial part of the BLfC development was engaging deeply with people from all the systems that will interact with the degree and with whom the learners/graduates would interact. This was a very different process from the usual consulting with representatives of employer groups. This was a practical challenge: who should we talk with? It was also a philosophical opportunity: who has the right beyond the learner to validate their design of their professional practice? Our approach was essentially to move this philosophical question to the degree itself; the learner is going through an extended validation of their own design (as it evolves and at the same time as developing themselves to meet it). As the degree itself developed, we needed people to act in the place of these learners, not to validate the specific outcome, but to evaluate the approach. Beyond the many face-to-face conversations we had with people, we engaged approximately 300 people in a series of surveys centred around the journeys of learners as represented by the personas. It is worth asking if this is really co-creation? As Patton (2015, p. 307) describes it:

> The developmental evaluator works collaboratively with social innovators to conceptualize, design, and test new approaches in an ongoing process of adaptation, intentional change, and development. Developmental evaluation is interactive – engaging social innovators, funders, supporters, and other core stakeholders to tailor and align the dynamics of innovation, development, adaptation, and evaluation. This dynamic amounts to the co-creation of both the unfolding innovation and the developmental evaluation design.

We believe it was not just the fact that we worked with people that made it co-design, but that there was meaningful engagement that did not presume answers. We went further as we did not presume questions; the challenges posed by stakeholders in one round formed the basis of developments in the next. Once delivery got underway, the focus for co-creation shifted towards internal stakeholder engagement, especially prioritising the learners' voices along with the staff team in shaping the programme's learning community culture and infrastructure.

Timely feedback

Patton's principle of Timely Feedback concerns evaluative results on an ongoing basis rather than at predetermined times. This suggests a shift to an evaluative mindset where every interaction is an opportunity for feedback, and every premise needs investigating. For us, the personas were key. Stemming from the expansion of "Rimu," these personas provided timely feedback throughout, not as flimsy marketing cut-outs of potential learners, but as deep and rich "people" into which we (and the co-designers) invested. Although we sometimes referred to the personas as our "crash-test dummies," it is worth noting that this was done with a sense of nurturing – we were not trying to *break them.* So we asked our co-designers to think of ways each persona might *"break the degree," for example, getting a different job, losing faith in their religion, realising their career pathway was not for them* and so on, and how we might address that in the learners' favour in the specification of the degree. We had hundreds of these evaluative narratives. This ongoing evaluation approach was far more useful in this development than the formal consultation process. The subsequent delivery focus has been one of constant attention to feedback, observation, reflection and adaptation, nurturing possibility thinking, and trying to remove barriers for learning.

CONCLUSION

In this article, we have presented a narrative of the development of an innovative degree: the Bachelor of Leadership for Change. We then used the lens of Patton's Developmental Evaluation Mindset (2015) to provide a sense-making framework for exploring this narrative. We now distil these findings as a set of principles that may be useful for future educational innovation:

1. Educational innovation must be in and of the systems that will use it.
2. The learner is the expert on their own experience and outcomes. Presume self-determination and be clear about when and why, if this is not possible.
3. Innovation comes from deep connection to context, principles, relationships and purpose. Following this deep connection is more important than applying a formula.
4. Distinguish innovation from improvement, and be prepared for the complexity involved.
5. Start with deep engagement in purpose and principles, especially if that purpose exposes wicked problems and need for societal change.
6. Start. If #5 above leads you to a place where the answers are not obvious, but you have a good sense of values and principles, then this is the right place to be.
7. Be collaborative. Surround yourself with a core of change makers and have a wider network you can pull on. Ask questions you do not know the answers to, and seek questions you have not thought of, or rocks you would rather not look under.
8. Engage a positive, creative, and curious mindset. Be critical but remember that criticality is positive evaluation to make the innovation better not mere negativity.
9. Be integrative. Ideas and evaluations can come from anywhere: asking "what?" "so what?" "now what?" questions can help make ideas and evaluations useful. Take every opportunity possible to communicate and discuss even barely coherent ideas. This is the best form of evaluation and creative development.
10. Have no pre-conceived ideas about how it might work. Allow ambiguity to persist for as long as possible. Experiment with how it might work in various ways and actively seek timely feedback to rapidly learn and adapt.
11. Treat barriers as clues to design.
12. Do not pick winners, instead develop an approach that embraces change (if you find yourself adding a specific piece of required knowledge that might be out of date in 10 years, take it out, and also ask yourself how your model allowed a place for such a detail).
13. Have actual people (or deep personas) in mind and test their multiple narratives. The deeper, richer, and more varied these narratives are, the better. This is a good opportunity to engage diverse stakeholders.

In a separate article we unpack more of learning from the implementation phase of the programme. Developmental evaluation, learning and adaptation continues at every step. We acknowledge all those who contributed to seeding this innovation, particularly Phil Osborne, Ray O'Brien, Steve Henry, Phoebe Eden-Mann, and Phil Ker, and the 31 graduates to date and the current learners on the journey with us.

Samuel Mann is a Professor at Capable NZ, Otago Polytechnic. Sam's focus is making a positive difference through professional practice. He developed the role of the sustainable practitioner, the Sustainable Lens and Transformation Mindset. He also led the development of the Doctor of Professional Practice.
https://orcid.org/0000-0002-1118-7363

Margy-Jean Malcolm is a Taranaki-based academic mentor/learning facilitator with a particular interest in leadership formation for changemakers. She has been working for Capable NZ on the Bachelor of Leadership for Change and Doctor of Professional Practice since their initial delivery began.

REFERENCES

Anderson, L. W. (2002). Curricular alignment: A re-examination. *Theory into practice, 41*(4), 255–26.

Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, S., Sutherland, J., Thomas, D. & Jeffries, R. (2001). *Manifesto for agile software development.* https://agilemanifesto.org/

Ker, G. R. (2017). *Degrees by independent learning: A case study of practice at Otago Polytechnic, Dunedin, New Zealand* [Unpublished doctoral thesis]. Middlesex University. https://eprints.mdx.ac.uk/id/eprint/22862

Malcolm, M. J. (2020). A self-determined learning environment supporting changemakers. *Scope: Contemporary Research Topics (Work-based Learning), 1,* 32–39. https://doi.org/10.34074/scop.6001004

Mann, S. (2011). *The green graduate: Educating every student as a sustainable practitioner.* NZCER Press.

Mann, S., Ker, G., Eden-Mann, P., & O'Brien, R. (2017a). Designing for heutagogy: Case study of an independent learning pathway approach. *Scope: Contemporary Research Topics (Flexible Learning), 2,* 59–70.

Mann, S., Ker, G., Eden-Mann, P., & O'Brien, R. (2017b). Qualified to surf chaos: A self-determined degree. *Scope: Contemporary Research Topics (Learning and Teaching), 3,* 24–38. https://www.thescopes.org/assets/Uploads/5471ead5d5/SCOPE-learn-teach-3-Web-4-Mann-et-al.pdf

Patton, M. Q. (2010). *Developmental evaluation: Applying complexity concepts to enhance innovation and use.* Guilford Press.

Patton, M. Q. (2015). The developmental evaluation mindset: 8 guiding principles. In M. Q. Patton, K. McKegg, & N. Wehipeihana (Eds.), *Developmental evaluation exemplars: Principles in practice* (pp. 289–324). Guilford Press.

Patton, M. Q., McKegg, K., & Wehipeihana, N. (2015). *Developmental evaluation exemplars: Principles in practice.* Guilford Press.

New Zealand Productivity Commission. (2016). *New models of tertiary education: Draft report.* New Zealand Productivity Commission.

Schuler, D. (2009, October 30). Pattern languages as critical enablers of civic intelligence [Paper presentation]. PUARL Conference, Portland, Oregon. https://www.publicsphereproject.org/content/pattern-languages-critical-enablers-civic-intelligence

Scott, G. (2016). *Powerful assessment exemplars.* FlipCurric. Western University Sydney. http://flipcurric.edu.au/resources-references/powerful-assessment-exemplars

Te Pūkenga. (n.d.). Programme redevelopments and reunification. Retrieved April 10, 2022, from https://xn--tepkenga-szb.ac.nz/our-pathway/academic-delivery-and-innovation/programme-redevelopments/

Vitek, B., & Jackson, W. (2008). *The virtues of ignorance: complexity, sustainability, and the limits of knowledge.* University Press of Kentucky.

Article

doi.org/10.34074/scop.6003007

BUILDING A CULTURE OF EVERYDAY INQUIRY, LEARNING AND ADAPTATION

Margy-Jean Malcolm, Samuel Mann and Deane Patterson

INTRODUCTION

The age of COVID-19 embodies a collective experience of adaptive leadership amidst complexity – for individuals, whānau, hapū, iwi, communities, workplaces, as well as researchers and professional practitioners. In this article, we tell stories of some significant 'aha moments' in the adaptive leadership of an innovative Bachelor of Leadership for Change degree and identify how key insights emerged that informed programme pivots, actions and decisions.

The storytellers bring three distinct perspectives. Margy-Jean, a learning facilitator involved in programme delivery from the outset, shares stories from the early delivery and co-design phase with the first adopters (2018/2019). Deane, a programme graduate who brought a learner voice through their research to recent programme adaptations, shares stories of his contribution to the reset phase (2020/2021). In a separate article in this issue, Sam, the lead programme designer, shares insights from his story of the programme development phase (2016/2017) which set the foundations for approval by the New Zealand Qualifications Authority (NZQA).

We argue that our intentional 'everyday inquiry on the run,' engaging diverse research methods and stakeholders, has been a key structure supporting our capacity to learn, lead and adapt amidst the complexity of this age. We discuss how an intentional programme culture of inquiry, learning and adaptation and specific research processes have enabled valuable leadership learning opportunities for our tauira/learners. In addition, we suggest ways in which developmental evaluation approaches can contribute further in the future of this innovation. We offer our stories to others interested in the role of embedded reflective practice in supporting education innovation, leadership and learner agency.

BACKGROUND

Otago Polytechnic's Bachelor of Leadership for Change (BLfC) is a self-directed, action-centred degree programme designed to support people wanting to make a difference in their lives, workplaces and communities. The programme guides and supports learners to build confidence and core transferable leadership, learning and change capabilities as they identify a problem, figure out a solution and get into action (Otago Polytechnic, 2022).

The programme was developed and designed around heutagogical principles (Hase & Kenyon, 2007; Blaschke, 2010) over a two-year period culminating in NZQA approval for delivery in late 2017 (Mann et al., 2017a, 2017b). Heutagogical principles set a foundational understanding of learning as emergent, contextual and collaborative. Therefore the programme's learning infrastructure and curriculum has needed to be highly flexible and responsive to diverse learner contexts, cultures and capabilities. Learner contracts and pathways have been shaped by the learner with their learning facilitator, agreeing what needs to be learned, what learning activities/processes will support that learning and how evidence will be gathered and presented for assessment to demonstrate what has been learned in relation to programme requirements.

Facilitation of transformative learning, particularly in the age of COVID-19, has involved working with an ongoing tension between structure and emergence (Malcolm, 2020). A culture of individual and collective inquiry-based learning and adaptive leadership amidst complexity has not only been central to the learner journey, but also for the learning facilitators leading the programme. The facilitation team's ongoing reflective practice has been essential to continually observe, reflect on any issues emerging in their practice, figure out solutions and take, often rapid, action to respond and adapt to meet learner needs.

An intentional culture of collaborative inquiry, learning and adaptation, based on the concept of developmental evaluation (Gamble, 2008; Patton, 2011) has provided some structure for the BLfC facilitation team's reflective practice through complex times since 2018. Any new innovation faces adaptive challenges, especially transitioning from a small group of keen, early adopters to scale to a larger, wider audience (Moore, 2014). However, in this context there are additional pressures from the restructuring of the vocational education sector into Te Pūkenga, and the associated re-positioning needed within the programme's home institution to renew the programme's mandate. Further, COVID-19 constraints limited some of the face to face opportunities for learners and other key stakeholder engagement in the programme culture of co-design.

METHODOLOGY

Developmental evaluation (DE) provides rapid feedback of evaluative information to social innovators and their stakeholders to inform adaptive leadership and development of change initiatives in complex, dynamic situations (Patton et al., 2016). Developmental evaluation brings an evaluative mindset to innovators' practice and helps track the impact of activities as they happen to support development, and to guide adaptation and rapid innovation from what is learned (Patton 2011; Westley et al., 2006). Developmental evaluation differs from formative evaluation which seeks to improve a particular model of practice, and summative evaluation which seeks to test if a particular model achieves desired outcomes (Patton, 2011).

The research methods used in the programme's DE work since the delivery phase began have included both informal and formal data gathering and analysis to inform agile, responsive adaptation, for example:

- Formal facilitated sessions for learner input, including feedback about programme design, success factors, improvement suggestions and impact.
- Very regular facilitation team meetings to critically reflect on our practice, discuss any learner or group feedback and translate this into agreed actions and adaptations, for example of learning infrastructure.
- Focus groups and interviews with external stakeholders, colleagues, learners and alumni; one round convened by senior leadership in 2020 and two focus groups convened by the facilitation team in mid and late 2021.
- A student-led process of interviewing 11 fellow learners and alumni in 2021 around their learner journey and programme enhancement recommendations for the reset.
- Three visits from the programme's external Monitor (2019, 2020, 2021) and indepth staff team planning meetings have supported deeper sense-making and adaptations.

Building on earlier published findings from this DE work (Malcolm, 2020), this article is based on the authors' reflexive practice (Westoby, 2022) about the life of this programme. We each look back on the programme development processes we were involved in leading and the data/feedback/observations from our research to identify stories about significant pivots in thinking, actions, decisions and what supported their emergence. In the discussion, we revisit Patton (2016)'s explanation of a developmental evaluation mindset and essential guiding principles (developmental purpose; evaluation rigor; utilisation focus; innovation niche; complexity perspective; systems thinking; co-creation; timely feedback). We conclude that there are opportunities to strengthen some aspects of our application of DE into the future that could in turn strengthen the implementation of this innovation.

FINDINGS

Here we tell stories of some significant 'aha moments' and how key insights emerged from our research and reflections that informed programme pivots, actions and decisions. They were not necessarily all eureka moments. The seeds of their emergence were often sown over quite a period or through a combination of factors.

Building the plane while flying it: Margy-Jean's story

The first big insight for me was that 'building the plane while flying it' (that is, co-designing much of the course content and infrastructure with the first early adopters) made sense. Our BLfC facilitation team was confirmed a few weeks before the first learners started in February 2018. Nearly a decade earlier, my doctoral studies had included an indepth curriculum review for a not-for-profit sector management programme (Malcolm, 2014). My own internal quality drivers and assumptions about teacher responsibilities were on high alert. How could we do justice to this new degree and prepare curriculum resources in such a short timeframe?

The pivot moment for me was remembering a key message from all graduate interviewees in my doctoral research, "that the way the Unitec programme was taught had as much, if not more, impact on their leadership learning as the curriculum content" (Malcolm, 2014, p. 128). Therefore it was appropriate that our BLfC team focussed early on our own 'how' professsional practice, to create the conditions for learning to emerge. The 'what' curriculum content would draw on the diverse wisdom of the whole learning community – kaiako, tauira, guest speakers – and learners' own inquiry skills and knowledge. My practice needed to let go some of my 'teacherly-responsible' behaviours to embrace a more heutagogical mindset of learning as emergent, contextual and collaborative. So, as a team we discussed shared underpinning values, what shifts self-determined learning required of us, designed initial (mostly online) learning infrastructure and research strategies that would support ongoing, collaborative co-design, learning and agile adaptation as a whole leadership learning community with the early adopters.

My second significant "A-HA" moment emerged during the first formal developmental evaluation session with the learners in 2018, seeking indepth feedback on their learner journey experience so far and insights into programme design enhancements. One of the tauira commented how they now realised how much their voice really mattered in this programme co-design. It was a leadership experience in itself for them, to have such agency compared to their previous experiences of education. Tauira in that initial cohort had a real sense of empowerment to push the boundaries of co-design. For example, one learner challenged the final assessment requirements and persuasively argued for more emphasis on oral assessment as a strategy for decolonising education (Te Wake, 2020). Staff and organisational responses to tauira feedback continued to show that learner voices and leadership could impact structural change as well as their own individual learning pathways.

The key pivot from a teaching, learning and research perspective was to see participation in an adaptive culture of programme co-design, evaluative thinking and collaborative learning as an essential part of the leadership learning 'hidden curriculum.' Our learners are required to design and implement processes for critically evaluating their own change projects. Staff modelling of ethical practice, research process design and their direct experience as research participants helped scaffold experiential learning towards these capabilities. However, while we can offer these opportunities, not all tauira (exercising their self-determined learning agency) choose to participate in these research activities.

A third key pivot point emerged when we had an opportunity at our noho marae intensive with 15 learners in November 2020, to engage in our annual formal DE feedback session. By now we had a more diverse range of learners who had all started at different times. COVID-19 constraints had delayed our ability to get them together face to face earlier on in their studies. Tauira experience of learning

challenges in adapting to a different learning culture and positive programme success experiences were similar to earlier learners (Malcolm, 2020). However what surprised me was that we had significantly more feedback about programme improvements needed than previously, especially around improved onboarding, information and communication platforms and bicultural practice.

This was important, constructive feedback, but how was it be interpreted? Was it a factor of different research methods (greater percentage of learners involved and face to face engagement), facilitation staff team changes, the 'personas' of this group of learners, the impact of COVID-19 and not being able to meet face to face earlier? Quite likely all of the above, and in hindsight, also a sign of a new phase of development, where learners were coming in with expectations of a more established programme compared to the early adopters. We clearly had to work differently to create a strong cohesive learning community when we cannot get learners together as a group early on in their study. Furthermore, it was important to put these improvement flags alongside the stories these same learners shared of the programme impact on their self awareness, sense of identity, appreciation of process, growth in 'ako,' relational and cultural capabilities, critical thinking capacity and broadening perspectives, with identifiable ripple effects on their families and work contexts already.

Resetting the trajectory: including Deane's story

By 2020, New Zealand government reforms of vocational education were shaping up a new national operating environment for all polytechnics, and a new programme like this was vulnerable being still in its establishment stage. Otago Polytechnic leadership reviewed the programme's alignment with the new Te Pūkenga context and conducted external stakeholder focus groups. A key pivot at this stage was senior leadership recognition that this programme offered significant potential to meet the needs of Te Pūkenga priority groups, including Māori, Pasifika, and neurodiverse learners (not just their original vision of serving a school leaver niche). The value of our own DE research was evident in these decisions, and the team was resourced to invest in a range of programme 'reset' improvements.

Deane, now a graduate of the programme, focused his final year's study in 2021, on a research project bringing a learner lens to the reset work. His positioning meant he had a unique opportunity to gather open, honest feedback from learners that they may not have shared so freely with facilitators – and presented a challenge to make sense of their feedback without simply reporting back key themes. He explains the emergence and significance of his findings next:

> As a part of my BLfC final year change project, I contributed a learner's voice to the 'reset team.' I have professional experience in creating, promoting or redeveloping educational programmes for corporate, online and college programmes. Using ethnography as the tool to bring out patterns and programme-relevant data, I searched for commonalities in the 11 interviewees' reports of their experiences and developed my interpretation of these. This is the data most corporate projects collect to find possible improvements in the 'customer experience.'
>
> Most interviewees were in their last year of the programme or had recently graduated. Most were very precise about what they had learned from their time in the programme. Everyone talked about things they struggled with which they thought hindered their progress rather than added to their learning. Two graduates had had conflicts with facilitators and fellow learners. When I asked them directly about 'obstacles,' that could be 'fixed' they advocated for the removal of at least three core programme components: the ethics review, bicultural practice, and the 'ako' community. Yet when asked what they were doing after graduation, their answers demonstrated that they both were seeking to learn more about those same challenges in further study they had since embarked on. My interpretation was that the 'obstacles' had not defeated them. Rather, the challenges they faced had quite likely played a part

in prompting a shift in their professional practice and their understanding of themselves. I would say a transformation had occurred.

Every interviewee commented on the Ethics Review. Before the review, many learners interpreted the ethics questions as Otago Polytechnic being risk-averse or protecting itself. After, almost all learners described it as an opportunity to get feedback about their research from an outside source and a chance to see the holes in their process. This represented a measurable transformation of attitude in my interpretation.

I began to see that without challenges the learners did not experience the *disruption* that Mezirow (2018) described as a vital part of any transformational learning experience. I had begun my research with the view that an 'effective' programme was an easy one. That all impediments to learning should be removed. But where there is no 'transformation of practice,' there is only the imparting of basic skills. The disruption had a vital role.

I began to see that 'the obstacle is the way' and that the community of practice is vital in working through those obstacles. Mezirow concluded that without disruption, a learner won't make the fundamental changes that strengthen their professional and personal practice. At those vulnerable moments, learners asking other learners for help can foster community. Yet most of the interviewees were solopreneurs whose first instinct was to resist oversight or collaboration. Having to find help rather than avoid a problem was consistently new for most learners I interviewed. I experienced this when other learners asked me for help too, and thus a key learner message from my final reporting was that having people (facilitators and other learners, or 'ako' practice) to work through problems is one of the main benefits of the programme.

Instead of my original plan to create a map so learners could avoid or easily conquer some of the more difficult parts of the course (at the risk of dumbing down the handbooks and resources) I instead advocated for telling learners 'why' (not how) they needed to deal with each obstacle. All the 'whys' are in fact expressions of the Graduate Profile Outcomes that are the fundamentals of the programme's intentions and the rubrics learners are graded by. Further I recommended a variety of ways to improve communication of the diverse sources of help that learners can ask for. That act of asking, rather than being told 'how to' all the time, leads to a more profound learning experience. It develops critical thinking, reveals research paradigms and strengthens habits of self-directed learning including an ability to embrace vulnerability and uncomfortable disruptive experiences.

HOW DEVELOPMENTAL EVALUATION FINDINGS ARE INFORMING PROGRAMME ADAPTATIONS

The programme team role was to listen to diverse perspectives from different stakeholder groups (learners, graduates, our external programme monitor, senior leadership, colleagues) and operationalise programme amendments.

Two underlying tensions for a programme like this stood out from our latest multi-stakeholder workshop in December 2021 that have been inherent, ongoing issues to navigate. Firstly, the tension between what is self-determined by the learners and what are foundational programme requirements. Secondly, how to enable learners to see the critical connections between the various parts of the programme infrastructure. For example, participation in our programme Community of Practice, knowledge of Te Tiriti o Waitangi, and critical reflective practice are all essential foundations for learner and programme success, yet tempting spaces for a vulnerable or strongly independent learner to avoid. Face to face hui for learners and staff can play a critical role in onboarding, learning and stretching mindsets, yet budgets and COVID-19 can easily get in the way of these happening. The progamme culture involves mindshifts at many levels: from learning as an individual journey to one of collaborative 'ako'; accepting vulnerability, discomfort and uncertainty as part of learning; building clear

connections between critical reflection, evidence of capabilities and framing one's practice. The programme reset so far has grappled with these tensions in the following ways:

- Stronger onboarding processes for learner cohorts at fixed times in the year – a move away from a rolling intake whenever the learner is ready – which also make face to face intensives early in the learner's journey more feasible.
- A more rigorous recognition of prior learning process on entry, to better determine the appropriate study pathway for experienced learners.
- Revision of the entry courses which all learners complete to lay common foundations.
- Revision and moderation of all assessment rubrics and handbooks to provide consistent, clear messaging including around commitments required and a glossary of key language.
- Development of a new 'one stop shop' Moodle site as the primary information platform and use of Teams as the primary communication platform.
- Introduction of four checkpoints across each study year to monitor/support learner progress with developmental feedback, including the option to invite fellow learners, whānau, workplace or community colleagues into these conversations.
- Revision of collaborative project courses to now be done with their programme peers, to strengthen learning. community engagement.
- Clearer communication throughout of expectations, boundaries and supports available for self-directed learning.
- Initial work on embedding Otago Polytechnic's Māori Strategic Framework across the programme, based on a stocktake of what is already in place towards becoming a bicultural programme.
- Online celebration of graduands as an off-boarding step when graduation ceremonies have not been possible.

DISCUSSION/CONCLUSIONS

One of the important contributions of Deane's research was to prompt us to communicate our kaupapa more clearly with our tauira, including explaining our underlying educational intent around transformational learning (Mezirow, 2018). We aim to strengthen our orientation of new learners to expect and embrace 'disorienting dilemmas,' engage in critical reflection, and commit to being part of our community of practice to make sense of the actions they are taking to grow their confidence and capabilities in new roles, relationships and contexts (Otago Polytechnic, 2022). Learning to "work with the uncomfortable and the emergent spaces" (Malcolm, 2020, p. 36) is one of the most common programme impacts described by our alumni. Thus, while we continue to strengthen the programme foundations, our goal is to scaffold and support learners through some relevant challenging experiences.

Our programme expects tauira/learners to grow capabilities to be reflective practitioners able to undertake critical evaluation of their professional practice. They do this through curating their own experiential learning with work-based learning projects and activities to support their leadership learning. The DE processes outlined show how the programme research context can offer an experience of evaluative thinking, learning about designing and delivering evaluative practices and how these can directly influence change. This is what Patton (2016, p. 307) calls the process use of DE, in which "learning and behaviour changes [can] occur among those involved in the evaluation as a result of their involvement – for example, becoming more adept at evaluative questioning and thinking."

Developmental evaluation research requires teaching staff and other key institutional stakeholders to model a culture of evaluative thinking, intentional inquiry structures, openness to feedback and listening to diverse voices in co-designing key programme features. This has been an ongoing iterative inquiry for the BLfC facilitation team, as the complexity and diversity of learners' contexts, changed project aspirations and capabilities have continued to test and clarify the boundaries of what is possible within the institutional parameters of a tertiary qualification, albeit a highly innovative one. The programme's future is still uncertain at the time of writing, but the research provides a solid foundation for when the time is right for the next phase of growth and development of this innovative degree.

Reflecting on the use of DE principles, processes and mindset to date, we can see the need for more graduate/alumni, workplace, whānau and community stakeholder voices to be built into our ongoing developmental evaluation research, to gain a wider picture of the learner journey intersection with real-world, longer-term outcomes. One positive outcome of our reset work is to engage more of these stakeholders in learners' quarterly checkpoint conversations, to add value not only for the learner, but to our ongoing, real-time programme feedback loops. While we show the depth and breadth of external stakeholder engagement in the initial programme development phase, our DE work since initial delivery has been very learner-centred, in other words, internal stakeholder focused. While this has been for sound educational co-design reasons, Patton's (2016) DE mindset principles (more fully discussed in Mann and Malcolm, in this issue) remind us of the importance of engaging all the key systems actors in the DE inquiry process.

Developmental evaluation at its most rigorous should bring a wider 'systems thinking' lens and at its most valuable, be designed as a process that supports the life-force of an innovation's intent. Patton argues that DE is ultimately about 'dynamic reframing,' seeking to "articulate, test, inform and reframe mental models of the 'actors' for the system they are operating in and the ways they have been and could be influencing it, so as to realize their intent" (Patton et al., 2016, p. 7). There is a lot of complexity to manage in an innovative programme like this and institutional leadership, industry stakeholders, facilitation staff, learners and their whānau need to understand our intent/kaupapa, our roots/whakapapa and be more engaged in co-creating the next phase.

Reflecting on the complexity of the BLfC journey to date and the essential elements of DE (Patton et al., 2016), there is more work to be done around evaluation rigor, and in particular, engagement of all the "actors" who need to be on board to realise the potential use and impact of this programme. As Deane's research highlighted, it is tempting to look at the obstacles that learners face and consider them as risks that need to be mitigated, programme improvements that need to be made, or more structured curriculum content that needs to be offered. However, this programme is based on real-world experiential learning around leading change. The obstacles are a necessary part of the way and emerge without anyone needing to actively create them. Wicked problems do not have simple solutions and require leaders to be active inquiring, collaborative learners, curious to explore questions they do not know the answers to and open to look in the mirror at their own practice.

Developmental evaluation provides a framework for all the actors in educational innovation to bring an inquiring learning mindset to work with the necessary complexity, emergence, and opportunities of a leadership learning qualification. It is possible, but not easy, for innovators themselves to be insider researchers leading DE. It has been timely to pause, reflect and write about this work before designing the next phase of this research inquiry, which will focus on the graduate impact. We offer our research to support understanding of heutagogical philosophy in action and the implications for operational culture, boundaries, processes, promotion and resourcing. Our evidence indicates that educational innovations such as this can support successful leadership learning experiences for a diverse range of learners, including Māori, Pacific and the neurodiverse. Embedding an intentional DE approach enables a diversity of stakeholder voices to engage in ongoing inquiry, learning and adaptation.

GLOSSARY

Tauira – learners(s)
Kaiako – teachers/learning facilitator(s)
Ako – each person's capacity for being both a teacher and a learner
Noho marae – a residential retreat staying at a Māori meeting house
Te Pūkenga – the new national structure for vocational education in Aotearoa NZ
Whānau – extended family

Margy-Jean Malcolm is a Taranaki-based academic mentor/learning facilitator with a particular interest in leadership formation for changemakers. She has been working for Capable NZ on the Bachelor of Leadership for Change and Doctor of Professional Practice since their initial delivery began.

Samuel Mann is a Professor at Capable NZ, Otago Polytechnic. Sam's focus is making a positive difference through professional practice. He developed the role of the sustainable practitioner, the Sustainable Lens and Transformation Mindset. He also led the development of the Doctor of Professional Practice.

https://orcid.org/0000-0002-1118-7363

Deane Patterson is a Dunedin-based content creator with an extensive history in film and television. He is completing his Master of Professional Practice with a focus on developing a community of practice for musicians to access resources for thriving.

REFERENCES

Blaschke, L. M. (2012). Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning. *The International Review of Research in Open and Distributed Learning, 13*(1), 56–71.

Gamble, J. A. A. (2008). *A developmental evaluation primer.* https://mcconnellfoundation.ca/wp-content/uploads/2017/07/A-Developmental-Evaluation-Primer-EN.pdf

Hase, S., & Kenyon, C. (2007). Heutagogy: A child of complexity theory. *Complicity: An International Journal of Complexity and Education, 4*(1), 111–118.

Malcolm, M. J. (2014). *Civil society leadership as learning.* [Doctoral dissertation]. Auckland University of Technology, Auckland. http://aut.researchgateway.ac.nz/handle/10292/7212

Malcolm, M. J. (2020). A self-determined learning environment supporting changemakers. *Scope: Contemporary Research Topics (Work-based Learning) 1*, 32–39. https://doi.org/10.34074/scop.6001004

Mann, S., Ker, G., Eden-Mann, P., & O'Brien, R. (2017a). Designing for heutagogy: An independent learning pathway approach. *Scope: Contemporary Research Topics (Flexible Learning), 2,* 59–70.

Mann, S., Ker, G., Eden-Mann, P., & O'Brien, R. (2017b). Qualified to surf chaos: A self-determined degree. *Scope: Contemporary Research Topics (Learning and Teaching), 3,* 24–38.

Mezirow, J. (2018). Transformative learning theory. In K. Illeris (Ed.), *Contemporary theories of learning* (2nd ed.). Routledge.

Moore, G. (2014). *Crossing the chasm: Marketing and selling disruptive products to mainstream customers* (3rd ed.). HarperBusiness.

Otago Polytechnic. (2022). *Progamme handbook: Bachelor of leadership for change.*

Patton, M. Q. (2011). *Developmental evaluation: Applying complexity concepts to enhance innovation and use.* Guildford Press.

Patton, M. Q., McKegg, K., & Wehipeihana, N. (2016). *Developmental evaluation exemplars: Principles in practice.* Guildford Press.

Te Wake, T. (2020). Oral assessment as a strategy for decolonising education. *Scope: Contemporary Research Topics (Work-based Learning), 1,* 40–46. https://doi.org/10.34074/scop.6001005

Westley, F., Zimmerman, B., & Patton, M. Q. (2006). *Getting to maybe: How the world is changed.* Random House.

Westoby, P. (2022). *Understanding phenomenological reflective practice in the social and ecological fields: Three rivers flowing.* Routledge.

Article

doi.org/10.34074/scop.6003012

LEARNER AGENCY: EXPLORING PERSPECTIVES FROM NEW ZEALAND, DENMARK AND CANADA

Jan Hendrik Roodt, Steve Henry, Thomas Iskov, Lis Montes de Oca, Ginger Grant and Anju Kakkar

MOTIVATION AND PURPOSE

The purpose of this article is to explore and reflect on the changing professional practice of educator facilitator-mentors in relation to student-centred learning and learner agency in vocational institutions across three countries. The collaborative work stands against the backdrop of the COVID-19 pandemic and exploring different ways of delivering skills and competencies suited to the market and how to empower adult learners. We were motivated by our passion for learning from others, even if we had to meet online over three time zones rather than in person as before.

CONTEXT

Student-centred learning (SCL) is a term widely used in literature about the higher education sector and the delivery of services. It seems to be a catch-all for a broad group of pedagogical concepts and approaches focussing on the learner and their learning. At the core are active learning, deeply reflective and experiential learning, shifts in responsibility and accountability to the learner, learner autonomy, the physical environment where learning takes place, and more focus on the relationship between the learner and the teacher. In European policy, SCL aims at effective learning, higher learning outcomes, and the overall purpose is competencies suited for the labour market (European Higher Education Area [EHEA], 2009; Dakovic & Zhang, 2021). As a pedagogical approach, the purpose is wider, including deeper transformational learning, critical and humanist education and whole-person learning (Hoidn & Reusser, 2021).

Recently, the role of the teacher has seen more scrutiny; there is a clear move to see the teacher as a mentor-facilitator, focussing on the learner's learning journey rather than on the content being studied (Hoidn & Reusser, 2021). Interestingly enough, this concept is not new and can be traced back to the writings of Jean-Jacques Rousseau, the work of John Dewey, who linked problem-solving and learning with the pace being set by the learner, and the constructivist theories of Piaget and Vygotsky (Hoidn & Reusser, 2021; Lefrançois, 2019). However, what is missing from much of the discussion is the high dimensionality (many facets) of the identity of the learner and how that translates into the development of the relationships, the learning, and the assessment of progress and transformative outcomes. Even though we are only starting our investigative journey, we have already uncovered exciting aspects of what we would like to call the recognition and development of the learner's agency.

The concept of changing learner (and mentor-facilitator) *agency* is core to the approach we aim to follow. Part of what we hope to develop further, in the collaboration under the Global Polytechnic Alliance (VIA University College, n.d.), is how this concept is understood and perceived in each of the participating organisations. We plan to draw carefully on several resources as we continue this work. We are careful to state that this is a view that we use as a starting point for discussion, internally and externally.

THE RESEARCH OPPORTUNITY

We were invited during May 2021 to join a small and focussed group of researchers working in the SCL space within the Global Polytechnic Alliance (GPA). The GPA was established between like-minded organisations in 2018 when Otago Polytechnic (OP) signed a three-way agreement with the Humber College Institute of Technology & Advanced Learning (Humber College) Ontario, Canada, and VIA University College (VIA UC) Aarhus, Denmark. The aim of the agreement is to open up opportunities for collaborative studies for students and staff. The idea was, at the time, that people would have the opportunity to visit physically and interact with like-minded learners and professional staff around matters of mutual interest in the practice-based and work-based education environment. During the COVID pandemic, other ways had to be found to work around the restrictions on travel and interaction.

The invitation for collaboration in our case came from the Research Center for Quality of Education, Profession Policy and Practice at VIA UC, and the call was to initiate our research based on the question: *How can we move toward a joint research agenda for delivering professional practice programmes on the basis of the SCLT-review that makes sense both from a comparative perspective and from three, individual, institutional viewpoints?* The question was deliberately vague for our scoping study, and during the first meeting, we had the opportunity to meet as passionate individuals from the Northern and the Southern hemispheres.

We agreed early on that it was important to keep our group small. We all volunteered to take part when the call went out, and we believed that it would be best for those of us that saw the need for this work to continue until we had a better understanding of what we wanted to get our collective heads around and to develop comfortable dialogue and trust. The option was to exit if we believed we could not get traction around a common theme and not waste the time of too many in the process. And when the time came, and we did gather momentum, we would grow the kōrero (conversation together) to include more interested individuals. For now, it was up to us to refine the focus of our research collaboration.

PATHS TAKEN

The way we have gone about the process so far is interesting. From the OP side, we in New Zealand believe that we came to the conversation initially to listen, to contribute from experience, and to understand how we can enrich the learner journeys of those we facilitate on their work-based learning adventures. We had no preconceived ideas other than that. The teams from Humber College and VIA UC voiced similar positions and also added that they were under pressure to improve their practice and that they saw this as an opportunity to develop evidence-based strategies and plans for their institutions.

During the first six Zoom meetings (early morning in New Zealand, previous evening in Denmark and early afternoon on the previous day in Canada), we compared notes on what we understood under the concept of SCL; we compared notes on our policy frameworks that structure and direct our operations (at a very high level). We shared stories of working with our learners within ever-changing corporate structures and uncertainty using Starkey's model of three dimensions of student-centred learning: humanism, cognition and agency (Starkey, 2019). We identified *agency* as a key dimension to define jointly in the context of sharing what this meant to us in our contexts. Finally, through sharing our views, we developed an initial shared understanding of what seems feasible to create this summary of our learning from our practice.

The common ground is only starting to emerge. We hope that, rather than looking for an integration of ideas, a superposition of thought will develop in due course. In the next sections we reflect on our growing understanding in this journey.

Otago Polytechnic – New Zealand

As our discussion progressed, it was clear that we share a passion for the success of our learners. In the most recent presentation made by the OP team (Jan Hendrik and Steve), the Capable NZ values were covered, and we pointed out that they have a similar flavour to the 'Agile Manifesto' values for software development (Beck et al., 2001). For example, we value the learning process over the focus on disciplinary content, and although we value the focus on content, we value the learning process more. In essence, the approach is not to choose one over another but to choose both in a way that recognises the learner's *needs* being central to our efforts. This way of choosing BOTH in a relative (not relativist) context is a key aspect of the transdisciplinary philosophical position that we introduce a bit later. We acknowledge that the approach has implications for assessment practice, something that we hope to address in the future.

Our thinking is not radically different, we believe, to what our research partners aim to do. What we want to highlight is the richness that is specifically introduced by the bi-cultural socio-political landscape in New Zealand and how that richness shapes the context of the practice-based research our learners undertake. In New Zealand, Māori and Pasifika learners have been marginalised in the formal education system (Milne, 2016). This is due to the culture and place of the individual being overlooked when educators presume that all learners identify with the same or similar culture, despite recognising the detrimental effects of this disassociation (Hook, 2007). Inherent in this assumption is the entrenchment (conscious or otherwise) of neo-colonial attitudes and approaches (Smith, 2008). In Professional Practice learning in the context of work, programmes that are designed by Māori, for Māori and are delivered by Māori are providing optimal conditions for Māori learners (Te Maihāroa et al., 2021). This aligns with what Reeves (2007) suggested with the positioning of education and research for unlocking the potential for innovation. A more recent positioning paper by Macfarlane and Macfarlane discussed the need for cultural competence and safety in research endeavours, and it is clear that both learners and mentor-facilitators must be confident and ready to adopt "culturally-adept research practices" (2018, p. 76).

In this context, we have decided to define *agency* as the curated development of independent knowledge acquisition and identity development and empowerment. This is related to heutagogy or self-directed adult learning, which differs significantly from taught learning (pedagogy for children and andragogy for adults) (Heick, 2015). Note that we carefully avoided the notion of the individual (and autonomy) versus the collective in that definition. Our reasoning is that we need to consider different worldviews carefully, down to the use of language, metaphor and symbology.

It is perhaps helpful to look at how one could approach this from a transdisciplinary perspective based on an axiomatic set that considers knowledge as a forever open construct, that there are infinite lived realities, and that there is an inclusive logic that allows for opposing positions to be simultaneously held (Nicolescu, 2010). Such a perspective opens the door to considering world views from a position of equal validity.

The Māori worldview differs from Western worldviews and approaches. *Mātauranga Māori* includes cultural heritage and accumulated wisdom. Knowledge is seen as a gifted privilege and not a right and has spiritual connotations (Woller, 2013). Mika (2012) suggests that the ways in which mātauranga are being defined as knowledge undermines the notion of 'Being' and of a spiritual relation between 'Being and Knowing' and shows the challenge of a rational Western versus Indigenous world view. By considering the logic of transdisciplinarity, one can see the potential of working with both world views and the knowledge production inherent to both, which was highlighted in the government document by Reeves mentioned earlier. More importantly, it puts these views on equal footing, to be respected equally.

In another work, Nicolescu (2018) builds on these concepts and talks about *learning to be*. It is explained as an ongoing apprenticeship between mentor-facilitators and learners in a process of identity development. In our professional practice context, it resonates with *ako,* a traditional concept meaning both to learn and to teach (Morrison & Vaioletti, 2019). *Ako* is a relationship between knowledgeable people interacting to develop a

positive outcome for all, learning from each other as they share knowledge in a reciprocal framework of *manaaki* (support), *aroha* (respect) and *toha tukuroa* (reciprocity) (Davies & Eruera, 2009; Bishop & Glynn, 2000). These elements are encased in broader concepts of the individual strengths and needs of a learner (*tuakiri),* including reflective practice and discussion. It is flanked by *wānanga:* knowledge, wisdom, practice and responsibility (in the context of the past, the, present and the future); as well as a desire to create cohesion of thoughts and ideas and communities of practice (*kaupapa*).

These concepts are not necessarily foreign to the Western world view(s), and we posit that a post-modern worldview may be found to be congruent with many aspects of the Māori worldview. For example, it is encouraging to see how readily we resonate with the German terms that Hans-Georg Gadamer uses when he talks about experience, action, and critical reflection as necessary parts of learning: *die Erfahrung* – experience shaped in discourse and based on culture and history; *das Erlebnis* – lived experience and understanding the self; and *verstehen* – to understand – as the experience of Other in relation to Self (Béres, 2017). Clearly, experience is multi-faceted and being able to actively probe these dimensions in discussion with learners to develop gnoseology (multi-faceted knowledge) is a strong asset.

That brings us to the point where we consider agency and *mana* (prestige, authority, control, power, influence, status, spiritual power), as different AND the same (and something we hope to explore as a thesis in our collaboration). Manaakitanga is described as behaviour that acknowledges the mana of others as having equal or greater importance than one's own through the expression of aroha (compassion, empathy), hospitality, generosity and mutual respect. Only if our concept of agency considers manaakitanga and the preservation and acknowledgement (even enhancement) of mana can we consider learners on equal footing. What still needs unpacking is the deeper implications of mātauranga Māori as inclusive of cultural heritage and collective, cumulative wisdom**,** mana gifted and spiritual, and how our mentor-facilitator practices must develop to include it.

As a part of the restructure of the New Zealand polytechnic network underway, since 2020 the New Zealand government has recognised indigenous learners as "priority learners" in an attempt to overcome historic injustice and marginalisation, with the goal of Māori facilitating Māori (Te Pūkenga, 2021). An early outcome of this restructure is Māori, Pacific, and disabled learners will access new mentoring and early out-reach/connection services in most regions which focus on increasing access, participation, and retention across the network (Te Pūkenga, n.d.).

The insights from a Danish and Nordic perspective are shared next by our collaborators in Denmark, and are also a reflection of European development.

VIA University College – Denmark and Europe

In a Danish and Nordic pedagogical tradition, there is a strong emphasis on the importance of content for the individual's formation process (*Bildung*). The process is not valued over the content, and should not be seen as an either/or. With references to Kant's concept of autonomy, German pedagogy, Humboldt's University, Gadamer's formation process and Klafki, it is through the encounter with the science and the cultural creations, and thus the content of teaching, that human beings develop a sense of the true, right and beautiful – and are formed into autonomy and enlightened self-determination (Klafki, 2016).

Alongside this tradition, the Frankfurt School and the critically liberating pedagogy has left clear traces in European and Danish education, and thus also in the reasoning for the spread of SCL in European education policy (Hoidn & Reusser, 2021; European Students' Union [ESU], 2015). Critical theory and the student rebellion in the 1970s thus form the basis for democratic elements in the Danish education system, with the spread of student councils, student organisations and committees, and for a pedagogy that aims at agency and autonomy. Thus, in the statutory purpose of the Professional Bachelor's Degree Programs, the development of independence and autonomy is clearly stated.

In an existential philosophical understanding of pedagogy, the Danish philosopher Søren Kierkegaard has been important for a distinction between becoming something – becoming skilled, competent and knowledgeable, and becoming someone – becoming oneself and developing a 'self that relates to himself' and strives for an ethical life. This way of thinking, resonating with Nicolescu's (2018) learning to be, is in a more postmodern competence thinking emphasising the ability to relate professionally to one's work (here educational practice), which in this context means to orient oneself according to the higher purpose of one's own practice (Hammershøj, 2017).

The before-mentioned traditions and perspectives also coexist with a special Danish folk high school movement and The Enlightenment with a focus on the significance of the narrative, the word and the community for building identity. The folk high school and the concept of non-formal adult education is associated with the Danish philosopher, poet, educational thinker and theologian, Grundtvig, and his thoughts concerning free educational opportunities, and is one of the special features of the Danish educational system.

The Danish and European philosophical and pedagogical tradition of *Bildung* (formation) and *Mündigkeit* (authority/autonomy) can – in the encounter with constructivism – be said to be challenged and repressed (Biesta, 2015; 2021 on 'learnification'), but also to be supplemented with a nuanced concept of learning. Thus, experimental and exploratory learning with reference to John Dewey's concept of educative experience, as an experience creating connections between a student's learning experiences and student's future decisions and behaviour, has greatly influenced problem-based learning at Danish vocational colleges and universities.

Educational constructivism from Piaget to Vygotsky and to Lave and Wenger has spread the concept of learning and has meant an increased focus on the learning processes and outcomes; however this is not simply rooted in psychology and learning theory. With the Bologna Process, European education policy has identified effective and lifelong learning as the overriding goal of higher education in the European Union. It is with this background that SCL is being implemented in the Danish education system as a requirement. With references to European communiqués, policy reports and quality standards (EHEA, 2015), the Danish Accreditation Institution (2017) has ordered the educational programmes to practise and document SCL, but without a specific stipulation or definition of what constitutes such learning processes. In the mentioned reports, SCL is very broadly defined as activating, motivating and participation among students in active processes (ESU & EI, 2010; ESU, 2015), which is justified by labour market-relevant competencies, critically liberating pedagogy, and reform pedagogy, amongst others.

However, in a recent report from the European Commission, the emerging concept of *agency* plays a central part: "This report defines student-centered learning and teaching (also referred to as SCLT) as an overarching approach to designing higher education processes, which is founded on the concept of student agency" (Klemenčič et al., 2020, p. 8). References are made to transformative learning, deeper learning outcomes, inclusive curriculum and pedagogy, and flexible learning pathways. It remains an open question to us, however, as to how we can understand agency in an educational context with standardised learning outcomes such as generally formulated learning goals, and how we in the education system can contribute to the students' development of agency without falling into a traditional individualistic thinking and pedagogy. This forms the basis for continued discussions and sharing of perspectives in the research group, and potentially also for empirical comparative studies which can contribute to common knowledge from our different contexts.

Humber College Institute of Technology & Advanced Learning – Ontario, Canada

Following on from the views from Otago Polytechnic and VIA, we found that the most interesting aspects of our collaboration were listening, learning and understanding multiple points of view and perspectives and then slowly bringing them together into a new approach to our practice here at Humber College. In North America, student-centred learning and teaching (SCLT) is called the Scholarship of Teaching and Learning (SoTL). It is a commitment to improving teaching and learning in Higher Education. The SoTL is a hybrid between a

profession and a discipline in that it is both a foundational body of knowledge and a developmental process for enlivening evidence-informed practice in the college classroom. As Humber College welcomes new industry and professional experts to its faculty, they become members of the teaching profession. The SoTL at Humber College is a place for continual professional learning for faculty and advancement of the field of teaching and learning through meaningful publication and knowledge-sharing opportunities. In April 2021, we undertook a complete redesign of our SoTL programmes and started to integrate them with our growing Applied Research practices.

The ongoing conversations with our GPA colleagues provided much food for thought; we needed to merge scholarship and praxis so that they continue to inform each other in a continuous cycle of exploration. Tasked with growing a teaching-oriented college's research culture presents both challenges and opportunities. Challenges include shifting institutional and personal preconceptions of who and what can be included in an 'official' research programme. Opportunities include designing innovative learning programmes to engage non-traditional and emergent researchers in developing meaningful and viable research practices.

For research and innovation learners, developing self-awareness is critical (Jarvis, 2006; Mezirow, 2009). Studies have pointed to a lack of self-awareness as a hindrance for emerging researchers when they attempt to design and build useful research and innovation projects; develop formal research practices; and/or optimise helpful community relationships to support their initiatives. Inspired by our ongoing conversations, elements of existing graduate-level programmes, self-awareness models, and insights on related undergraduate programme challenges, we created a one-year pilot of an innovative research curriculum design and engaged a purposive sample of recent graduates, employees, and faculty.

To drive innovation, we knew that an organisation must strengthen its adaptability and responsiveness to the unpredictable environment by integrating its capability for learning (Moustaghfir & Schiuma, 2013). Our ongoing search suggested that in order for an organisation to learn, that transformation and innovation are directly related to a person's capacity for innovation and learning (Sullivan, 2011; Wang & Ellinger, 2011; Grant, 2017). We sometimes forget that organisations are made up of people first.

Four new programmes have been piloted over the past year and will be offered to start in September 2022 in our faculty. These will form part of Humber's new 'Inclusive Research and Innovation Design' certificates. Our faculty will be able to take one or all four of the Humber certificates. We started with the 'Whole Self' – what would it mean to bring all of your previous life experience and your personal value system into a research practice? How would that differ from a traditional academic course in research methodology and methods? We learned much from the Māori perspective of combining cultural heritage with accumulated wisdom. We considered, and are still pondering, how agency plays a part in the process of building a research culture from the ground up. Our industry faculty bring much expertise; our task is to incorporate that knowledge into educational pedagogy AND keep the passion for the subject matter intact. Next, we then added a personal research project to allow these novice researchers to explore. The explorations led to questions, and those questions were then answered with pedagogy. First experience to create a context and container for the learning, then add learning theories and the cycle continues, ever informed by the experience (Kokkos, 2020).

The second part entails further exploration into how the faculty members bring that newly created understanding into a community of practice – whether it is the classroom and/or colleagues also engaged in exploration. Our belief is that we must shift from a traditional teaching paradigm to a transformative learning and teaching model that incorporates deep learning and reflective practice.

CONCLUDING REMARKS

As our discussions online over the uncomfortable time zone differences continued, we discovered that we are passionate about the development of our own practice to serve our learners and organisations better. We identified a common theme around the concept of learner agency and what that may mean in our different cultural contexts. This is an important focus for all of us, and we hope to continue our work while bringing more collaborators on board.

The cultural differences and approaches emerged quite clearly, but so did our common aim to focus on empowering outcomes for learners. We see these as opportunities to explore how a more inclusive pool of thought can be allowed to develop around transdisciplinary heutagogy and specifically learner agency.

We also learned much from this pandemic, and the accompanying uncertainty and ambiguity that this has and will create is changing the skills needed to thrive. A number of beliefs underpin the development of this mindset (adapted from Grant, 2017):

- In our current context of this global pandemic (2020) as twenty-first century learner/leaders we need to inspire as opposed to motivate. This ability to inspire is determined by our integrity of character (who we are, what we stand for, and how we act); our alignment of purpose and our ability to create the presence of trust.
- Authenticity and integrity occur when we develop self-awareness through ongoing self-reflection together with an ability to pay attention to others (empathy) and the current context in which we find ourselves. This attentiveness enables us to examine a situation from all angles and communicate a clear vision of what needs to be done. We "walk our talk."
- As twenty-first century learner/leaders, we need tools to help us become more reflective and attentive. We need to journey into our own hearts, minds and psyches to discover our core beliefs and perceptual filters to better understand and use the shared myths and stories that align and inspire an organisation to perform beyond the norm.
- Organisational transformation is achieved one person at a time. We as leaders and our organisations must focus on nourishing our human assets as human beings, or better still, as human 'becomings.' Ever evolving. Ever adapting. We need to develop our people's inner capacity for self-awareness and conscious choice making; otherwise, old behavioural patterns, which cause resistance to change, will persist. Never forget – assets now have feet.
- Our organisations will not achieve the results we desire unless our practices, policies and procedures reflect our espoused values and purpose. Those values need to be aligned with our employees and other key stakeholders. We need a growth mindset of 'both/and' – not 'either/or.'

We think a gift given by this pandemic has forced all of us to slow down and contemplate what really matters. That answer lies in front of us and is a story yet to be told. We look forward to our further collaborations. We have learned much and are grateful.

Jan Hendrik Roodt (linkedin.com/in/drjanroodt) is a transdisciplinarian working in strategic management and systems modelling in industry in New Zealand and Finland, and an advanced learning facilitator for postgraduate students in professional practice and innovation at Te Pūkenga, New Zealand. He is a member of the IEEE Systems Council, International Council on Systems Engineering, and IT Professionals New Zealand.

https://orcid.org/0000-https://orcid.org/0000-0001-5250-8066

Steve Henry is a Tasman-based facilitator working for Otago Polytechnic's Capable NZ, supporting learners to gain degrees based on learning from experience. His doctorate focus is on making sense of his practice with marginalized learners in their transformation and agency.

https://orcid.org/0000-https://orcid.org/0000-0002-4903-7213

Thomas Iskov is a Senior Associate Professor of Higher Education Pedagogy at VIA University College, Denmark. His research interests include quality and teaching in higher education, professional development and student-centred learning. He holds a PhD in general pedagogy and has a background in teacher education.
(https://www.ucviden.dk/en/persons/thomas-iskov; https://www.linkedin.com/in/thomas-iskov)

Lis Montes de Oca is an associate professor in social science at the Department of Social Work, VIA University College, Aarhus and recently accepted a new position with the Faculty of Humanities, Sports, and Educational Science at the University of South-Eastern Norway. Lis' main interests in teaching and research concentrate on educational design, student-centred learning practices, feedback literacy and collective supervision practices.
https://orcid.org/0000-https://orcid.org/0000-0001-7100-7603

Ginger Grant is the Dean of Research and Innovation at Humber College and is an Innovation Researcher, Academic Entrepreneur and Activist. Ginger's passion is innovation management – the design, development and implementation of innovation strategies that transform corporate culture, drive engagement and high performance teams for competitive advantage. She has held senior leadership positions and consulted in a variety of fields including engineering, telecommunications, education, transportation, government, law, software development, gaming and the creative industries.
https://orcid.org/0000-https://orcid.org/0000-0001-9130-1228

Anju Kakkar, a poet and storyteller at heart, is energized by the values of higher purpose, spirituality, mindfulness, inclusivity and collaboration. As Research & Innovation Specialist and Managing Editor of Humber Press at the Office of Research & Innovation at Humber College, Anju works closely with the Dean, Associate Deans and team in building a culture of care, community and inclusivity through the lens of research and innovation. Anju adopts a human-centred approach to solving problems that lead to sustainable and innovative solutions. She is a Green Belt Innovation 360 Licensed Practitioner (IMGB™) – in preparation for Black Belt (IMBB™), an MBTI Licensed Practitioner and a Values Perspective Coach. With a career that spans 25+ years, Anju is the Managing Editor of Humber Press at Humber's Office of Research & Innovation. A certified innovation expert with access to the leading ISO-compliant innovation management methodology by Innovation360 Group, Sweden, and an emerging researcher in the field of social innovation, she is driven by the values of purpose, inclusivity and collaboration (linkedin.com/in/anjukakkar).

REFERENCES

Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Maricj, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). *Manifesto for agile software development.* https://agilemanifesto.org/

Béres, L. (2017). Maintaining the ability to be unsettled and learn afresh: What philosophy contributes to our understanding of 'reflection' and 'experience'. *Reflective Practice,* 18(2), 280–290.

Biesta, G. (2015). *Beyond learning.* Taylor & Francis.

Biesta, G. (2021). *World-centred education: A view for the present.* Taylor & Francis .

Bishop, R., & Glynn, T. (2000). Kaupapa Māori messages for the mainstream. *Set, 1,* 4–7.

Dakovic, G. & Zhang, T. (2021): Student-centered learning from a European policy and practice perspective. In S. Hoidn & M. Klemencic, (Eds.), *The Routledge international handbook of student-centered learning and teaching in higher education.* Routledge New York.

Danish Accreditation Institution. (2017). *Hovedperson i egen læring. Studentercentreret læring i et dansk og europæisk perspektiv.* Danmarks akkrediteringsinstitution.

Davies, S., & Eruera, N. (2009). Te Toka Āhuru: An indigenous framework for whakaako (academic development). *MAI Review, 3,* Teaching & Learning Workshop 5. http://www.review.mai.ac.nz/mrindex/MR/article/view/267/290.html

European Higher Education Area [Bologna Process]. (2009, April 28–29). *Communiqué of the Conference of European Ministers Responsible for Higher Education, Leuven and Louvain-la-Neuve.*

European Higher Education Area. (2015). *Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).* Brussels, Belgium.

European Students' Union. (2015). *Overview on student centred learning in higher education in Europe,* European Students' Union. https://esu-online.org/?publication=overview-on-student-centred-learning-in-higher-education-in-europe

European Students' Union & Education International. (2010, October). Student-centred learning: Toolkit for students, staff and higher education institutions. Brussels. https://esu-online.org/?publication=student-centred-learning-toolkit-students-staff-higher-education-institutions

Grant, G. (2017). The untapped power of imagination in the workplace. In J. Neal (Ed.), *Handbook of personal and organizational transformation* (pp. 147–181). Springer International Publishing.

Heick, T. (2015). *What is the difference between pedagogy, andragogy, and heutagogy?* https://www.teachthought.com/pedagogy/a-primer-in-heutagogy-and-self-directed-learning/

Hoidn, S., & Reusser, K. (2021). Foundations of student-centered learning and teaching. In S. Hoidin, & M. Klemenčič (Eds.), *The Routledge international handbook of student-centered learning and teaching in higher education.* Routledge New York. http://ebookcentral.proquest.com/lib/otagopoly/detail.action?docID=6269275

Jarvis, P. (2006). *Towards a comprehensive theory of human learning: Lifelong learning and the learning society* (Vol. 1). Routledge.

Klafki, W. (2016). *Dannelsesteori og didaktik – Nye studier.* Klim.

Hammershøj, L.G. (2017). *Dannelse i uddannelsessystemet.* Hans Reitzels Forlag.

Klemenčič, M., Pupinis, M., Kirdulytė, G. (2020). Mapping and analysis of student-centred learning and teaching practices: Usable knowledge to support more inclusive, high-quality higher education, NESET report, Luxembourg: Publications Office of the European Union. https://doi.org/10.2766/67668

Kokkos, A. (Ed.). (2020). *Expanding transformation theory: Affinities between Jack Mezirow and emancipatory educationalists.* Routledge.

Lefrançois, G. R. (2019). *Theories of human learning* (Kindle e-book). Cambridge University Press.

Macfarlane, A., & Macfarlane, S. (2018). Toitū te Mātauranga: Valuing culturally inclusive research in contemporary times. *Psychology Aotearoa, 10*(2), 71–76.

Mezirow, J. (2009). Transformative learning theory. In J. Mezirow & E. W. Taylor (Eds.), *Transformative learning in practice: Insights from community, workplace, and higher education* (pp. 18–32). Jossey-Bass.

Mika, C. T. H. (2012). Overcoming 'being' in favour of knowledge: the fixing effect of 'mātauranga'. *Educational Philosophy and Theory, 44*(10), 1080–1092. https://doi.org/10.1111/j.1469-5812.2011.00771.x

Milne, A. (2016). Where am I in our Schools' white spaces? Social justice for the learners we marginalise. *Middle Grades Review, 1*(3). https://scholarworks.uvm.edu/mgreview/vol1/iss3/2

Morrison, S. L., & Vaioletti, T. M. (2019). Ako - a traditional learning concept for Māori and Pacific youth and its relationship to lifelong learning. *Bildung und Erziehung, 64*(4), https://doi.org/10.7788/bue.2011.64.4.395

Moustaghfir, K., & Schiuma, G. (2013). Knowledge, learning, and innovation: Research and perspectives. *Journal of Knowledge Management, 17,* 495–510.

Nicolescu, B. (2010). Methodology of transdisciplinarity–Levels of reality, logic of the included middle and complexity. *Transdisciplinary Journal of Engineering & Science,* 1. https://doi.org/10.22545/2010/0009

Nicolescu, B. (2018). The transdisciplinary evolution of the university condition for sustainable development. In D. Fam, L. Neuhauser, & P. Gibbs (Eds.), *Transdisciplinary theory, practice and education* (pp. 73–81). Springer.

Reeves, P. (2007). *Vision mātauranga.* Te Manatū Pūtaiao Ministry of Research, Science & Technology.

Smith, L. T. (2008). *Decolonising methodologies.* Zed Books and Otago University Press.

Starkey, L. (2019). Three dimensions of student-centred education: A framework for policy and practice. *Critical Studies in Education, 6*(3), 375–390. http://doi.org/10.1080/17508487.2017.1281829

Sullivan, R. S. (2011). Business schools and the innovation conundrum. *Journal of Management Development, 30,* 492–498.

Te Maihāroa, K., Leonard, G., & Karena, T. (2021). Optimal Learning conditions for Masters and Doctor of Professional Practice Māori Learners. *Scope: Contemporary Research Topics (Kaupapa Kāi Tahu), 6,* 92–106. https://doi.org/10.34074/scop.2006004

Te Pūkenga. (2021). *Statement of intent.* https://tepūkenga.ac.nz/assets/Publications/TPNZIST0043-2021-02-04-GOV-Transitional-Statement-of-Intent-2021-24-FINAL.pdf

Te Pūkenga. (n.d.). *Our pathway.* https://tepūkenga.ac.nz/our-pathway/

VIA University College. (n.d.). *Case: The Global Polytechnic Alliance, GPA*. https://en.via.dk/global-partnerships/partnerships/global-polytechnic-alliance

Wang, Y., & Ellinger, A. D. (2011). Organizational learning. *International Journal of Manpower, 32*, 512–536.

Woller, P. (2013). A culturally responsive methodology of relations: Kaupapa Māori research and the non-Māori researcher. In M. Berryman, S. SooHoo, & A. Nevin (Eds.), *Culturally responsive methodologies* (pp. 287–302). Emerald Group Publishing.

Article

doi.org/10.34074/scop.6003004

THE PHENOMENON OF THE WORKING AROUND ENTREPRENEUR THROUGH COVID-19 IN NEW ZEALAND AND SOUTH AFRICA

Sandy Geyer

THE PROBLEM: THE FAILURE OF ENTREPRENEURIAL LEADERSHIP

My personal experiences as an entrepreneur and a practitioner have led me to suspect that the high failure rate in entrepreneurship (Bushe, 2019; Dias & Teixeira, 2017; Mansfield, 2019; Raiz, 2019), is linked to ineffective entrepreneurial leadership. Entrepreneurial leadership, as a discipline, is a relatively new style of leadership recognised in academic research. In the entrepreneurial context, all entrepreneurs need to be leaders (Leitch & Volery, 2017). My practitioner experience as both an entrepreneurial trainer and a student leader trainer suggested that the journey of leadership learning should begin in early high school through an intervention to lay a foundation for self-awareness and self-leadership. With this hunch, I entered the academic sphere by enrolling for a Doctor of Professional Practice with the aim to better prepare future entrepreneurial leaders earlier in their education. The notion that ideas for both quantitative and qualitative research projects begin with a hunch is well recognised in literature on research methodology (Moon, 2004).

METHODOLOGY

Pragmatism, which "directs us to seek practical and useful answers that can solve, or at least provide direction in addressing concrete answers" (Patton, 2015, p. 152), provided a unique philosophical world-view for this study. The mixed methods research design followed four phases, culminating in the fifth phase with the proposition of a new theory of leadership preparation, through a grounded theory progression.

Action research functioned as an overarching method to identify, plan, act and reflect to solve the problems identified in this study (Dickens & Watkins, 1999). Figure 1 provides an overview of the two action research cycles of the study.

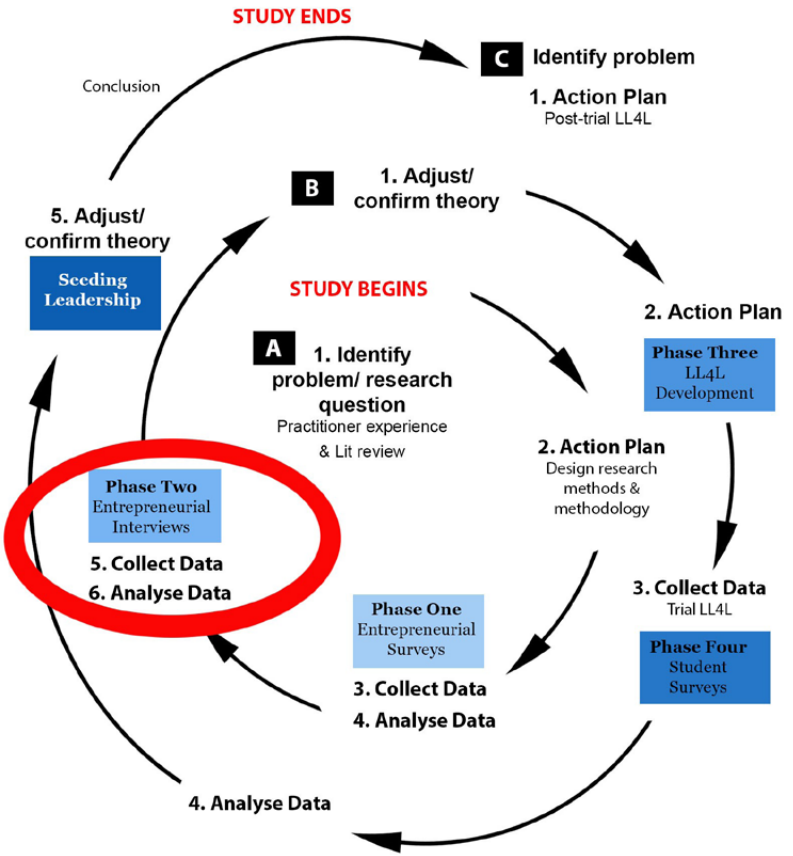


Figure 1. Overview of the full action research process of this study. The red circle indicates Phase Two, to which this article relates (Source: Author).

Phase One (at A.3 and A.4) used a quantitative data collection and analysis method, to identify sources of positive influence on currently successful entrepreneurial leaders, using an online anonymous survey. Phase Two used qualitative data collection to deepen insights from Phase One with 10 participants from New Zealand and 10 from South Africa. Phase Three planned to integrate the sources of positive influence identified into an intervention workshop for first year high school students and Phase Four planned to trial the intervention workshop within eight participating schools in New Zealand and South Africa.

This article focusses on two patterns that emerged from the findings of Phase Two, using a phenomenological lens of enquiry that asserts that phenomena exist only within a certain context (Patton, 2015). Phenomenology entails gaining data from a group of participants, with the aim of "painting a picture" from their lived experience of the phenomenon under study (Bolderston, 2012). Their thoughts, ideas and perceptions provided data for this discussion around successful entrepreneurial leadership through COVID-19 (Bolderston, 2012). The two patterns identified, named the adversity thriver pattern and the entrepreneur's identity crisis, uncovered the authentic nature of the working around entrepreneur during the COVID-19 crisis. There were no notable differences between the New Zealand and the South African participants with regards to the two patterns discussed here.

The impact of COVID-19 on the research design

The arrival of COVID-19 in March 2020 had an impact on my research, my practice and my two businesses. My data gathering now needed to happen mostly on-line. I had to apply for ethical approval to conduct interviews via video platforms such as Zoom. A pioneering, if relatively small, study found that researchers' and participants' general satisfaction with the Zoom platform indicated its suitability as a qualitative data collection tool, (Archibald et al., 2019). Within the context of the pandemic, I was a working around COVID-19 entrepreneur, researching with other working around COVID-19 entrepreneurs to gain insights into their success drivers.

Interview participants

Twenty entrepreneurs participated in one-on-one interviews between 8 October 2020 and 25 March 2021. Ten were from New Zealand and 10 from South Africa to align with the geographical locations covered by my professional practice. There were four female and 16 male participants across several cultural backgrounds including representation from White European, Black African, Asian and Māori ethnicities. Their ages ranged from 23 to 64. From March 2020, all participants had led, and were continuing to lead, their businesses through lockdowns. Hence, COVID-19 provided a new definition (Bolderston, 2012) for the term "currently successful" by adding the participation requirement of "successful through COVID-19 so far."

FINDINGS

Pattern one: The adversity thriver pattern

When the interviews started, I had been navigating through the COVID-19 crisis for six months myself as an entrepreneurial leader. I asked all the participants to share their lived experiences of how they had first responded to the COVID-19 crisis. Whilst not in the immediate scope of my research focus, this question provided rich insights into successful entrepreneurial leadership. I was interested in their reactions to realising that the crisis was real, was going to impact their businesses dramatically and had come without warning. The majority described their response to the realisation of the seriousness of COVID-19 as immediately taking action. This action was largely focused on making their staff and clients feel safe from the effects of the crisis. Many described days of video calls to facilitate this. For many, keeping their staff employed meant obtaining loans to cover payrolls, either from other businesses or from formal lending institutions. Whilst businesses in New Zealand were promised government assistance, this was not guaranteed and the immediate response of New Zealand entrepreneurs did rely on this assistance. These loans were all personally committed to by these leaders, with no more inside knowledge about what the COVID-19 pandemic would entail, than any of their staff members. They automatically assumed all risk and responsibility for the anticipated effects brought about by COVID-19. As an entrepreneur, I realised upon reflection that both my business partner and I had responded in a similar manner to these participants. This revealed a backwards confirmation of researcher bias (Poggenpoel & Myburgh, 2003), where I realised something about myself only after seeing it consistently in others.

Personal values as an influence

I was curious to find out what was driving such a response. I searched previous research on entrepreneurial leadership for clues, starting with personal values. Could the response they described be related to each entrepreneur's personal or professional set of values? Steven Hitlin (2003) argued that an individual adopts a certain value because it reflects their true self that is already intrinsically there at birth. He concluded that core values are unique to an individual in ways that group and role identities are not. Shalom Schwartz (2012) noted that values play an important role in the attitudes and behaviour of individuals and groups. He pointed

to a universal organisation of human motivations using values. However, the relative importance of values differ between individuals and societies. Whilst values are adopted, they are re-ordered within each individual, suggesting that certain common values could have been present in these participants. This was taken into consideration but could not practically be measured during the interviews.

Innate leadership traits as an influence

The next question was if these entrepreneurs were born leaders who naturally responded this way. There is an ongoing debate in leadership studies as to whether leaders are born or made (Brungardt, 1996; Gladwell, 2009; Murphy & Reichard, 2012; Rosch et al., 2015). In their study, Johnson et al. (1998) traced the origins of scientific thought on heritable leadership traits to Galton, who in 1869, conducted a study on the pedigree of one hundred individuals considered to be great men. Since this greatness prevailed in their family history, it was believed that greatness was hereditary. However, despite many studies attempting to align certain traits with successful entrepreneurship (Caliendo & Kritikos, 2011; D'Intino et al., 2007; Jain & Ali, 2013; Kolb & Wagner, 2015; Neck & Greene, 2011; Obschonka et al., 2015), successful entrepreneurship could not be associated with specific traits (Gartner, 1985; Neck & Greene, 2011).

Leitch and Volery (2017) discussed entrepreneurial leadership through different ontological approaches (the reality for an entrepreneur) using both positivist and interpretive methodologies. They recognised a shift from the pioneer researcher focus (identifying a successful person with specific personality traits and attempting to categorise and define entrepreneurial leadership) towards the understanding that being an entrepreneur requires one to be a leader. This new understanding suggests that entrepreneurial leadership evolves through the process of entrepreneurship. Entrepreneurship and entrepreneurial leadership are intertwined. The findings from this study concurred that entrepreneurial leadership is a distinct form of leadership, different to leadership theories developed through corporate, military and educational structures (Dinham, 2007; Hannah et al., 2009; Karp & Helgø, 2009; Northouse, 2015).

Childhood experiences as an influence

If entrepreneurship naturally leads to entrepreneurial leadership, what drives an individual into entrepreneurship in the first place? I found that all participants who reflected the adversity thriver pattern had developed a significant sense of inner strength, personal responsibility, and a sense of duty to take care of others during their formative years. These seemed to have been founded in adversity. In most cases, they experienced difficult or traumatic childhoods. These experiences included absent parents, emotionally unavailable parents, no parents (or father/mother figure), alcoholic parents, abusive parents, negligent parents, parents at war, sexual abuse and two cases of extreme childhood illnesses. At some point during their development in an environment which left them vulnerable and lonely, they realised that they could rely only on themselves. "If it's going to be, it's up to me" came through frequently in the interviews through words or sentiment. What stood out to me was that this was not a survival response but a "thrival" response, where they experienced deep personal growth from their experiences. What might have broken others, had served, in these individuals, to ignite a powerful inner force.

Many were able to pinpoint the age when this personal growth happened and it ranged from four to twelve (I was eight) – when they were just kids. The Aldridge Foundation, a British educational charity, founded in 2006, that focuses on creating social change through enterprise and entrepreneurship, found that seven out of ten entrepreneurs cited traumatic childhoods as the reason for their business success (Shuman, 2015). This pattern was also present in autobiographies of entrepreneurs such as Elon Musk (Vance, 2016) and Steve Jobs (Isaacson & Jobs, 2015). In her autobiography, Mariah Carey captures and verbalises it best from my perspective. I reviewed her autobiography, not from the perspective of her music, but from her entrepreneurial spirit, which is strongly evidenced by her success as a business leader. She recounts at the age of 50 that she wrote her story for her

younger 4-year-old self. A 4-year-old self trapped between racial denominations, within a family divided and at war. "I understood on a soul level that no matter what happened to me, or around me, something lived inside of me that I could always call on. I had something to guide me through any storm" (Carey & Davis, 2020, p. 121).

One South African participant recalled how he had lived with his grandparents in Cape Town as a child. At the age of 12, he came home to find his grandparents standing outside their house with all their possessions. The apartheid government had decided to relocate a community of mixed-race people, who had lived there for over 100 years, to re-zone the area as a white-only area. He and his family were forcibly relocated to an area far from his school and everyone they knew. He told me this story when I asked him what the "one thing" was, that kept him going through adversity as a business owner. Once he finished his story he sat quietly for some time and then he said, "I keep going so that no one can ever put my family on a pavement again." Max van Manen (2017, p. 779) well summarises my feelings in this moment: "Genuine phenomenological inquiry is challenging and satisfying precisely because its meaningful revelations must be originary and existentially compelling to the soul."

Resilience and self-efficacy are not fixed traits

These adversity thrivers had two qualities in common. The first was resilience, a strong sense of belief in one's own capabilities and the other was self-efficacy, the ability to keep moving forwards through adverse conditions and bounce back, or forwards from devastating failure (Ashely & Reiter-Palmon, 2012; Hines, 2004). Resilience is often referred to as a fixed trait or personality type that one either does or does not have. Based on my own observations as an entrepreneurial trainer, resilience is more accurately described as a set of positive coping behaviours leading to efficient and effective recovery from challenges, pressure, stress, and trauma (Stemmet, 2021). It became evident through the stories of the participants that no one taught them about who they were and what they were capable of – life had taught them through experience; the hard way. These participants presented, through lived experience, evidence of how both reflective and experiential learning is untaught (Moon, 2004). They viewed risk as less scary because they had experienced extreme vulnerability and they had not just survived but thrived. They were not born to be entrepreneurs but were driven to entrepreneurship by the desire to become the masters of their own destinies because they had learned that no one else could be trusted to that role. Whilst two personality types (the more controlling ones) were more common in our sample, there were exceptions. This finding is in line with other research that entrepreneurs are a heterogenous group within multidisciplinary environments (Leitch & Volery, 2017).

The compassionate and sensitive side

I found that the adversity thriver pattern was not just self-preservation focussed but included a deeply rooted desire to protect others in their care. They had found meaning from their suffering and used this meaning to make a wider contribution to others, another central finding of resilience research (Stemmet, 2021). As each interview wound up, I told participants about the purpose of the study of better preparing future entrepreneurial leaders by laying a foundation of self-awareness, self-leadership and the ability to influence others positively earlier in their education. This was only revealed at the end of the interview to avoid creating expectations in answers to my questions. Most of the participants were enthusiastic about the aim of the project and shared that one of their key concerns, as parents, was how to equip their children with the traits they had developed through their own experiences, whilst protecting them from the pain and suffering they had endured through their formative years. The consistent element of the concern for the protection of others in their care suggests that the adversity thriver pattern includes an uncommon mix of high levels of self-efficacy and resilience alongside a deeply compassionate and sensitive side. Many recognised that they had translated their drive, attained through adversity, not into creating the world's best business, but into changing people's lives.

While telling their stories, none of the participants saw themselves as victims. They took on sole responsibility for their own well-being and the well-being of those around them. This response could be a reason why entrepreneurs are often labelled as superhuman or heroes in the media. This enquiry led to another insightful finding in the research; the entrepreneur's identity crisis.

PATTERN TWO: THE ENTREPRENEUR'S IDENTITY CRISIS

Early in the interviews, I noticed the participants felt uncomfortable about being labelled as entrepreneurs. Many felt that they did not fit this label as they only led one business. Others felt that the more traditionally held views of entrepreneurs as superhuman, super-wealthy, highly innovative go-getters did not fit, regardless of their many business ventures. Others quickly pointed out that being self-employed differed, in their view, to being an entrepreneur. They felt displaced by the fact that society wants to identify them with a label, usually attached to a role.

Previous research on the development of self-identity came to the fore in considering how common an issue this identity crisis was among the participants. The participating entrepreneurs voiced a common feeling of dichotomy between their sense of individuality as an entrepreneurial leader and their sense of place in a collective system of cultural and societal norms. This sense of place is described in entrepreneurial research as identity legitimacy, which is often withheld from entrepreneurs who are deemed to behave differently and inspire envy within a wider social and cultural context (Anderson et al., 2019). In New Zealand, this phenomenon is officially called 'tall poppy syndrome' where the otherness of entrepreneurs is highlighted in a negative way (Kirkwood, 2007; Kirkwood & Warren, 2020).

Why we need to belong

Previous research suggests that humans are born with certain sub-conscious, hard-wired systems to ensure their survival. One of these is the ability to recognise their "tribe" (Bargh, 2017). This innate tendency leads, as explained by social identity theory, to an in-group versus out-group distinction. Through a process called self-categorisation, self-identity is adopted from their surrounding in-group regarding their cultural and societal norms (Stets & Burke, 2000).

Most participants seemed to navigate their entrepreneurial paths comfortably within their cultural and societal norms. Interestingly, when asked how their cultural backgrounds had influenced their journeys as entrepreneurial leaders, they were unable to accredit any recognisable patterns of influence, across the four ethnicities represented within the sample. Identity theory explains the creation of our self-identity through the adoption of recognised roles within society (Hogg et al., 1995) and this is where the entrepreneurs seemed to become lost. Between their hard wiring to survive and their soft wiring to belong, they realised they had unwittingly arrived in an environment where they were afforded few fitting labels as entrepreneurs.

During the interviews, many of the participants expressed difficulty in finding their place of belonging within a socially recognised professional identity. Whilst driven and pioneering in their professions, the human part of them struggled with the lack of belonging and connection as human beings. Interestingly, many entrepreneurial leaders included "tea and coffee maker" when describing their roles. This role description offers a far more authentic reflection of the true nature of an entrepreneur than any high-flying title could achieve. It seemed a travesty that these individuals who stood so solidly simultaneously in front of, and behind their many stakeholders during a crisis, felt so isolated. The terms 'hero' and 'superhuman', used by the media to describe a minority of entrepreneurs, such as Richard Branson and Elon Musk, seemed to have isolated the majority, who are quietly making a difference in their worlds.

CONCLUSION

By identifying these two patterns in Phase Two, by means of a phenomenological lens of enquiry, this research captured the essence of the 'working around entrepreneurial leader' through COVID-19, differently to how labels such as 'superhero' might have. These findings support previous findings that entrepreneurs do not become entrepreneurs only because they are born with certain traits (Gartner, 1988). These participants were driven to entrepreneurship through circumstances and became leaders due to the nature of the entrepreneurial context (Leitch & Volery, 2017). When asked if they felt deserving of a 'hero' label, many pointed towards their staff, other stakeholders, or family members as the real heroes behind their success. It was relatively easy to get these resilient, humble and deeply caring participants to agree to an interview which required 50 to 60 minutes of their time. Many reflected, when receiving a thank-you note, that they had really enjoyed the experience. Entrepreneurial leadership, whilst perceived as exciting, challenging and somewhat glamorous, can also be lonely, with few appropriate peers or available mentors to talk to. It was both a professional privilege and a personal joy to interact with them, within their space, for this research project as both a co-traveller and a researcher, caught in the challenging and unknown phenomenon of COVID-19.

Sandy Geyer is both an entrepreneurial leader and practitioner in the area of business leadership and entrepreneurial leadership preparation. Based in Auckland, she is currently undergoing her Doctorate of Professional Practice at Capable NZ, which aims to better prepare future entrepreneurs for effective entrepreneurial leadership, earlier in their education.

REFERENCES

Anderson, A. R., Warren, L., & Bensemann, J. (2019). Identity, enactment, and entrepreneurship engagement in a declining place. *Journal of Small Business Management, 57*(4), 1559–1577. https://doi.org/10.1111/jsbm.12406

Archibald, M. M., Ambagtsheer, R. C., Casey, M. G., & Lawless, M. (2019). Using Zoom videoconferencing for qualitative data collection: Perceptions and experiences of researchers and participants. *International Journal of Qualitative Methods, 18,* 1–8. https://doi.org/10.1177/1609406919874596

Ashely, G. C., & Reiter-Palmon, R. (2012). Self-awareness and the evolution of leaders: The need for a better measure of self-awareness. *Journal of Behavioural and Applied Management, 14*(1), 2–17.

Bargh, J. A. (2017). *Before you know it: The unconscious reasons we do what we do*. Touchstone.

Bolderston, A. (2012). Conducting a research interview. *Journal of Medical Imaging and Radiation Sciences, 43*(1), 66–76. https://doi.org/10.1016/j.jmir.2011.12.002

Brungardt, C. (1996). The making of leaders: A review of the research in leadership development and education. *Journal of Leadership Studies, 3*(3), 81–95. https://doi.org/10.1177/107179199700300309

Bushe, B. (2019). The causes and impact of business failure among small to micro and medium enterprises in South Africa. *Africa's Public Service Delivery and Performance Review, 7*(1), 1-26. https://doi.org/10.4102/apsdpr.v7i1.210

Caliendo, M., & Kritikos, A. (2011). Searching for the entrepreneurial personality: New evidence and avenues for further research. *Journal of Economic Psychology, 33,* 1–11. https://doi.org/10.1016/j.joep.2011.06.001

Carey, M., & Davis, M. A. (2020). *The meaning of Mariah Carey.* Andy Cohen Books.

Dias, A., & Teixeira, A. A. C. (2017). The anatomy of business failure: A qualitative account of its implications for future business success. *European Journal of Management and Business Economics, 26*(1), 2–20. https://doi.org/10.1108/EJMBE-07-2017-001

Dickens, L., & Watkins, K. (1999). Action research: Rethinking Lewin. *Management Learning, 30*(2), 127–140. https://doi.org/10.1177/1350507699302002

Dinham, S. (2007). Authoritative leadership, action learning and student accomplishment. https://research.acer.edu.au/research_conference_2007/3

D'Intino, R. S., Goldsby, M. G., Houghton, J. D., & Neck, C. P. (2007). Self-leadership: A process for entrepreneurial success. *Journal of Leadership & Organizational Studies, 13*(4), 105–120. https://doi.org/10.1177/10717919070130040101

Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review, 10*(4), 696–706. https://doi.org/10.5465/amr.1985.4279094

Gartner, W. B. (1988). "Who is an entrepreneur?" Is the wrong question. *American Journal of Small Business, 12*(4), 11–32. https://doi.org/10.1177/104225878801200401

Gladwell, M. (2009). *Outliers: The story of success*. Penguin Books.

Hannah, S. T., Uhl-Bien, M., Avolio, B. J., & Cavarretta, F. L. (2009). A framework for examining leadership in extreme contexts. *The Leadership Quarterly, 20*(6), 897–919. https://doi.org/10.1016/j.leaqua.2009.09.006

Hines, J. L. (2004). Characteristics of an entrepreneur. *Surgical Neurology, 61*(4), 407–408. https://doi.org/10.1016/j.surneu.2003.05.004

Hitlin, S. (2003). Values as the core of personal identity: Drawing links between two theories of self. *Social Psychology Quarterly, 66*(2), 118–137. http://dx.doi.org.op.idm.oclc.org/10.2307/1519843

Hogg, M. A., Terry, D. J., & White, K. M. (1995). A tale of two theories: A critical comparison of identity theory with social identity theory. *Social Psychology Quarterly, 58*(4), 255. https://doi.org/10.2307/2787127

Isaacson, W., & Jobs, S. (2015). *Steve Jobs*. Abacus.

Jain, R., & Ali, S. W. (2013). A review of facilitators, barriers and gateways to entrepreneurship: Directions for future research. *South Asian Journal of Management, 20*(3), 122–163.

Johnson, A. M., Vernon, P. A., McCarthy, J. M., Molson, M., Harris, J. A., & Jang, K. L. (1998). Nature vs nurture: Are leaders born or made? A behavior genetic investigation of leadership style. *Twin Research, 1*(4), 216–223. https://doi.org/10.1375/twin.1.4.216

Karp, T., & Helgø, T. I. T. (2009). Leadership as identity construction: The act of leading people in organisations: A perspective from the complexity sciences. *Journal of Management Development, 28*(10), 880–896. https://doi.org/10.1108/02621710911000659

Kirkwood, J. (2007). Tall poppy syndrome: Implications for entrepreneurship in New Zealand. *Journal of Management & Organization, 13*(4), 366–382. https://doi.org/10.1017/S1833367200003606

Kirkwood, J., & Warren, L. (2020). Legitimizing entrepreneurial success in an environment of tall poppy syndrome: Lessons from celebrity entrepreneurs in New Zealand. *The International Journal of Entrepreneurship and Innovation, 21*(2), 101–112. https://doi.org/10.1177/1465750319845483

Kolb, C., & Wagner, M. (2015). Crowding in or crowding out: The link between academic entrepreneurship and entrepreneurial traits. *The Journal of Technology Transfer, 40*(3), 387–408. https://doi.org/10.1007/s10961-014-9346-y

Leitch, C. M., & Volery, T. (2017). Entrepreneurial leadership: Insights and directions. *International Small Business Journal, 35*(2), 147–156. https://doi.org/10.1177/0266242616681397

Mansfield, M. (2019, March 28). *Startup statistics – The numbers you need to know.* Small Business Trends. https://smallbiztrends.com/2019/03/startup-statistics-small-business.html

Moon, J. A. (2004). *A handbook of reflective and experiential learning: Theory and practice*. RoutledgeFalmer, http://www.dawsonera.com/depp/reader/protected/external/AbstractView/S9780203416150

Murphy, S. E., & Reichard, R. (2012). *Early development and leadership: Building the next generation of leaders*. Routledge.

Neck, H. M., & Greene, P. G. (2011). Entrepreneurship education: Known worlds and new frontiers. *Journal of Small Business Management, 49*(1), 55–70. https://doi.org/10.1111/j.1540-627X.2010.00314.x

Northouse, P. G. (2015). *Leadership: Theory and practice* (7th ed.). SAGE Publications.

Obschonka, M., Silbereisen, R. K., Cantner, U., & Goethner, M. (2015). Entrepreneurial self-identity: Predictors and effects within the theory of planned behavior framework. *Journal of Business and Psychology, 30*(4), 773–794. https://doi.org/10.1007/s10869-014-9385-2

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.

Poggenpoel, M., & Myburgh, C. (2003). The researcher as research instrument in educational research: A possible threat to trustworthiness? *Education, 124*(2), 418–423.

Raiz, A. (2019, June 2). *Glamourising entrepreneurship in South Africa: The warning label is missing!* SME South Africa. https://smesouthafrica.co.za/glamourising-entrepreneurship-in-south-africa-the-warning-label-is-missing-2/

Rosch, D. M., Collier, D., & Thompson, S. E. (2015). An exploration of students' motivation to lead: An analysis by race, gender, and student leadership behaviors. *Journal of College Student Development, 56*(3), 286–291.

Schwartz, S. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture, 2*(1). https://doi.org/10.9707/2307-0919.1116

Shuman, J. (2015, March 24). *Why childhood adversity creates great entrepreneurs*. Medium. https://medium.com/@JasonShuman/why-childhood-adversity-creates-great-entrepreneurs-9b1ce015f06a

Stemmet, D. L. (2021). *Deal with it – Do what inspires*. Independently Published.

Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly, 63*(3), 224. https://doi.org/10.2307/2695870

Van Manen, M. (2017). But is it phenomenology? *Qualitative Health Research, 27*(6), 775–779. https://doi.org/10.1177/1049732317699570

Vance, A. (2016). *Elon Musk: Tesla, SpaceX, and the quest for a fantastic future*. Ecco.

doi.org/10.34074/scop.6003011

STARTING THE DOCTORATE: LEARNINGS FROM THE JOURNEY SO FAR

Leigh Quadling Miernik

I'm not afraid ... to take a stand.

This lyric by Eminem (2010), has been ringing in my head for the last month in regards to just about everything I do in my Doctor of Professional Practice (DPP). This contribution outlines my DPP so far; from the application stage to realising it is my journey, just before the submission of the Review of Learning (RoL) task, ending with the emotional conclusion after reading its feedback. This realisation and feedback changed my perception of where I stand, how I feel and where I place my mentors. Using diary entries to give evidence to my transformation, this contribution is to support future DPP students, though they might be feeling afraid, to gain the confidence to take the steps. Seeing their journey as a mirror of mine, or knowing that it is a emotional roller coaster of a ride could assist with knowing they are not alone.

With the DPP itself aiming to be innovative and creative (Otago Polytechnic, 2022), so too is the opening of this contribution and the approach taken. The above lyric comes from the song "Not Afraid," and according to the Rolling Stone magazine (Kreps, 2010), the song is about a change in direction for Eminem, a positive transformation from a life of drugs and violence. The song conveys the struggle and the recovery, filled with lines of his personal stories. Perhaps if he was on the DPP journey, his RoL would incorporate this song, where these words are used to capture a learning.

So why has this lyric been stuck on repeat when I opened my RoL document to do some writing, or when I log into Mendeley to do some reading, or when I click "JOIN" for my mentor/mentee meetings? It's because my journey so far is filled with moments of being scared, overwhelmed and underconfident. These moments are reflected in the excerpts from my DPP diary. I will base the reflective exploration of my Review of Learning Journey for the first seven months of my doctorate using the 'ERA' framework (Jasper, 2013).

The 'ERA' cycle of reflective practice consists of a triangle of three points in a process where reflection occurs resulting in learning. The components within the cycle are Experience–Reflection–Action, where 'experience' is a critical moment or when something has happened to a person; 'reflection' enables the person to learn from the experience; and 'action' is the result from the reflection. A simple cycle of reflection is outlined in this contribution where I have noted experiences cumulating to a comment that lead to a critical understanding. From reflection on this moment, I outline my future actions as I head into the Learner Agreement task for 2022.

OTHER INVESTIGATIONS INTO DOCTORAL JOURNEYS

A doctorate journey is one that is well researched for being an emotional journey (Baptista, 2013; Cotterall, 2013; Hänggi, 2019; Morrison-Saunders et al., 2010). In Cotterall's study (2013), the focus was on the areas of tension that were common for PhD students. Results highlighted two areas of interest. The first: one third of emotional episodes related to accomplishing objects, described as a long-term goal. In this case, it centred around the writing of the work, while the second area that caused emotions, mainly positive, was the area of supervisor

interaction. Hänggi (2019) looked at the events which mobilised and demobilised doctoral students, where the emotions range from contentment and hope to fear and despair. Morrison-Saunders et al. (2010) discussed the doctorate journey as an emotional roller coaster where the initial phase is dominated by positive emotions of elation and enthusiasm, with elements of fear and bewilderment; the middle phase being predominately negative emotions linked to motivation goals and performance, covering frustration, boredom and isolation; while the final phase is a mix of both positive and negative emotions ranging from anxiety and panic to elation and satisfaction. This emotional journey is the result of the challenges related to doing reaserch.

MY JOURNEY

The original thought to start my doctorate started in December 2020. It took a while to gather thoughts, confidence and complete the application. It was at the this point I decided to keep a journal named "D.P.P journey: A diary of moments in the road to graduation."

Pre acceptance

Diary: March 23rd 2021

Today is the first day of what will hopefully be my Doctorate diary….

Today is the day I have my interview after the app. I am trying to stay calm and focused. To be myself and not to feel judged or threatened. So many pieces of advice or previous conversations (bits of) are coming into my head. I believe they are excited to chat to me. I believe they are there to support and uplift me, not to shut the gate in my face.

Acceptance

Diary: March 31st 2021

I've been accepted. Wow. Just that in itself is amazing, especially after all the thoughts of what I should've, could've said.

First day

Diary: May 3rd 2021

Today I am officially enrolled, part time in my doctorate. It's not feeling much different – obviously. But it is. I officially have a student debt and can say I am enrolled.

These diary entries highlight the elation and nervousness of the application stage. The surprise and the doubt show through even before I officially started and knew what I would need to do.

Consider the student's learning journey, which has become my journey. Imagine the road, a student is on it (me!), facing towards to end of the road, wherever that may be.

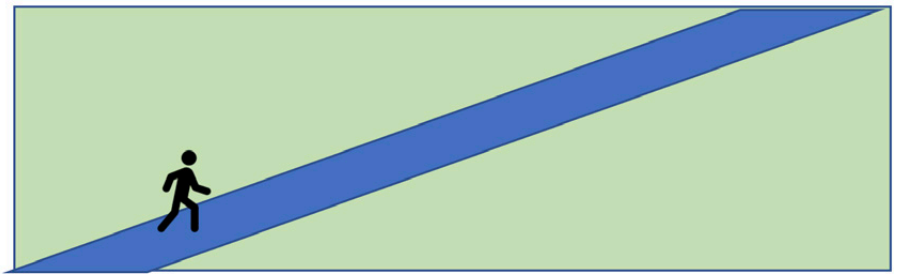


Figure 1. The learning journey.

Figure 1 is an overly simplistic representation, but that is me, on the start of my DPP journey. Can you describe the route? Do you see the destination, my destination? Is the route straight, meandering, with intersections or branches? Do I see the same route as you? Who decided the destination?

Now include yourself in the image as if you were my mentor. Where do you place yourself as the educator on the journey? Are you perhaps a font of knowledge? Or a facilitator? In a three-dimensional world, where is your position? In front of me? Beside me? Behind me? What is the distance between you and me? Which way are you looking? Towards the goal, or at me?

If the goal is 12 o'clock then I place myself as a teacher at the 5 or 7 o'clock position. Close enough to reach out for the student if stumbles happen. Far enough away so that the student has room to move and wander. I face forward so I can see the goal but more importantly the student. Perhaps the goal changes, but if I can see it, I can support the student to achieve it.

On my DPP journey I am the student, and the goal is scary, and very far away.

> Post acceptance/Pre official start
>
> Diary: April 6th 2021
>
> And now for the last 4 days I have had waves of panic – am I doing the right thing, can I survive, will I make it to the end, what toll will it take, am I strong enough, intelligent enough, brave enough. With each wave I think I can easily pull out now so do it – I got accepted that's enough. But then I think 1 more step forward, just to see how it goes. And that is where I am at the moment, dithering about in emotions before May 1st.

This diary entry shows my hesitancy, from the initial elation to the panic and further doubt. However, it also has a slight sense of tenacity, a determination or inquisitiveness to keep going to see what comes next.

Sometimes I look up and have been frightened at the distance, and the sheer amount of work needing to be done. My mechanism to cope has been to metaphorically look at my feet and take one step forward on the good days, and half a pin step forward on the bad. Always forward, no matter how small. Every time I look up, I am overwhelmed. When I hear the mentees talk about their journey and what's ahead for me, I feel anxious. When I think about speaking at the viva voce, I feel queasy. Yet every time I feel these emotions I look down and focus on my feet on the road.

Where did I put my mentors?

Post acceptance/Pre official start

Diary: April 9th 2021

About to officially meet my mentor, ummmmm, butterflies in stomach. Zooming meeting – weird but now normal. Feeling strange cos I know my Zoom face is not my normal face.

Re-reading my application – I know I am good, I know this is right and the correct way forward. Questions to ask – I have many, but I have none, only one – why are you interested in doing this project with me? What is motivating you to be involved? I will ask – I need to ask.

This diary entry describes the feelings of slight self-doubt and nervousness around meeting a mentor. Yet it holds a sense of self-belief.

I put them in front of me, blocking the view. As they were in front, I was awed at their knowledge, their experience, their statements, their extensive readings and their big words which I kind of understood but still needed to search up to understand. I have been amazed at their sentences that pour forth when we meet, which I scribble down as fast as I can. But the next day I do not quite understand my notes. And the distance between them and me? I have put far apart. I put them on the dais, which perhaps they did not know they were there, and possibly did not want to be there. To be honest they frightened me slightly.

Start of RoL

Diary: June 15th 2021

Yesterday's meeting was about building a Community of Practice – a group of knowledge, shared experiences, learning support, teaching, mentoring etc. I struggled to feel confident to speak, to add my voice – it's something I always have in my head and then something clicks/says "Stop – just do it."

I am officially 7 weeks old at this thing – a journey which will take 3 to 7 years. I want to rush ahead, do things, start on something but I am in a spin on how to see, how to travel this journey, how to tread, how fast to tread, which direction to move first, just everything. I'm spinning. I panic when I think about the goal – the writing, so much so that I force myself to look down at my feet and take the next step, not knowing if it is right or not but trusting in the journey, trusting in the people, trusting in myself to be strong in the next step, to stand not fall.

Many emotions are present in this diary entry. Excitement is still here, along with confusion and bewilderment. At this time, I am aware of what lies ahead, unlike the previous entries, where I do not fully know or understand the Review of Learning task. I am maintaining my solution to stem the negative emotions; take the next step, see where it goes.

Why have I put them in front of me? What in my background creates this situation? I believe that is my natural reaction when I feel the teacher knows more than me or has more experience. My educational experience is one of rote learning and teacher-centred, that is, very controlled. Most of my education up to my bachelor's graduation was led by the educator to the point of knowing what I need in order to pass the assessments. This is the one of the reasons why they are in front of me.

Until a repeated statement from both mentors finally stuck in my head. The message was "You don't have to agree with all the feedback. It's your journey" (M. Andrews & D. Freiburg, personal communication, November 17, 2021). This comment helped me reflect and realise that my mentors do not know the goal of the journey.

They do not know where I am going, any more than I do. So, although we are in it together, I am the pilot and navigator. This crucial moment placed me in control of what I want to achieve, how and when.

Furthermore, at this crucial moment I placed my mentors in the same position I place myself as an educator: beside and slightly behind me. They are now my mentors in role as well as job title.

Post RoL submission

Diary: January 14th 2022

8pm – an email from Martin to say that I've apparently passed the RoL and Danny saying Congrats, he had no doubt. Strange how both thought it would be ok whereas I felt it wasn't quite there. I need to believe in myself more.

Diary: Jan 27th 2022

At this moment, as I struggle to find a pen that works, I am very teary. Maybe it's the weight of 2021 or the fact that my teeth hurt, but it's also cos I've just read my RoL feedback. It's positive, it's joyful, it's an expression of the readers being excited by my work. It's the comment that I am working at a pace, not expected by a part-timer. It's the comment that the next part/course is exciting and a "very good idea." It's just everything.

I've just written an email to my mentors. 'If ever there was a moment where confidence has been increased, it is now. I need to remember this moment!"

An emotional high after times of self-doubt. Here I show how important it is for me to see the happiness, to hold this emotion and celebrate my achievement.

According to the ERA framework, by reviewing my reflections and evidence I have the ability to learn and set my actions. The actions for 2022, as I start the Learner Agreement, are:

- Remember: I have the motivation for change so I can step forward with confidence.
- Remember: I am forming my scholarly identity, and this will take time.
- Remember: My journey will be an emotional roller coaster, like those of other doctoral students, and that is to be expected. Accepting this brings me relief and confidence.
- Action: I will keep singing Eminem's song. The more I sing, the more I do. The more I do, the more confident I become. The more confident I become the less I will need to sing.

I finish this contribution where I started – with Eminem (2010). The next three lines aptly state the journey ahead:

We'll walk this road together, through the storm
Whatever weather, cold or warm
Just letting you know that you're not alone.

Leigh Quadling Miernik has experience in teaching, teacher training, learning support and educational management and is now relooking at her 30-year journey and the learnings that have arisen. Her passion is to create learning opportunities for students and educators and she has the motto "whatever gets to goal with integrity." Her interest lies in supporting educators to develop their knowledge and skills, and is starting to look into professional identity development for tertiary educators. She meanders through life, flowing strong at times, but petering to a trickle at others – a uniquely individual global community member.

REFERENCES

Baptista, A. V. (2013). The doctorate as an emotional journey: Navigating through perspectives of PhD students and supervisors. In *Proceedings of the SRHE Annual Research Conference 2013*. Celtic Manor Resort, Newport, Wales, UK.

Cotterall, S. (2013). More than just a brain: Emotions and the doctoral experience. *Higher Education Research and Development, (32)*2, 174–187. https://doi.org/10.1080/07294360.2012.680017

Eminem. (2010). Not afraid. [Song recorded by Eminem]. *Recovery*. Interscope Records.

Hänggi, C. (2019, May 21–24). *Emotional challenges along the doctoral journey: Self-determination theory in higher education* [Poster presentation]. 7th Self-Determination Theory Conference, University of Fribourg.

Jasper, M. (2013). *Beginning reflective practice*. Cengage Learning.

Kreps, D. (2010, April 29). Eminem gets personal on first 'recovery' single "Not Afraid." *Rolling Stone*. https://www.rollingstone.com/music/music-news/eminem-gets-personal-on-first-recovery-single-not-afraid-194343/

Morrison-Saunders, A., Moore, S. A., Hughes, M., & Newsome, D. (2010) *Coming to terms with research practice – Riding the emotional roller coaster of doctoral research studies*. In P. Thomson & and M. Walker (Eds.) *The Routledge doctoral student's companion: Getting to grips with research in education and the social sciences* (pp. 206–218). Routledge.

Otago Polytechnic. (2022). *Doctorate of Professional Practice*. https://www.op.ac.nz/study/capable-nz/doctor-of-professional-practice/

doi.org/10.34074/scop.6003010

ANTIFRAGILE LEARNING: BLACK SWANS TO GREEN SWANS

Ray O'Brien

INTRODUCTION

The practice of Learning Design faces challenges from an exponential rate of global change, and a need for learning to be future-fit. In meeting these challenges, the design of learning can be viewed as a leadership practice that has the potential to have significant positive impact. If, as designers of learning we are not maximising the positive impact available to us, then we become part of the problems of both today and tomorrow. We can choose to be the ones who say do "look up" (McKay, 2021).

This article describes how the future is generally viewed within the practice of Learning Design, and identifies some issues in light of our increasingly unpredictable world.

THE CURSE OF THE MEAN AND THE NORMAL

To create future-fit learning that will be effective and prepare learners for the future, we need to gain some insights into potential future events. When determining the risk of future events, we tend to look to the past to draw conclusions for the future (Snowden, 2011). We tend to anticipate future events based on the frequency at which they have previously occurred and estimate the magnitude of those events based on previous magnitudes (Arthur, 1994). The more frequent occurrences are, the more likely they are to reoccur. We assume what can be described as a *Gaussian* approach, which suggests that we see these events, at least anecdotally, in the context of a normal distribution or bell curve (Newman, 2005). Viewed through a Gaussian lens, negative events fall at one end of the x-axis and positive at the other (Figure 1). The closer to the apex of the bell curve, the higher the perceived certainty that the event will reoccur. The more pronounced the apex, the higher the likelihood of a few events, the flatter the curve the greater the range of likely events. Focussing on the apex allows us to capture most past and likely future events.

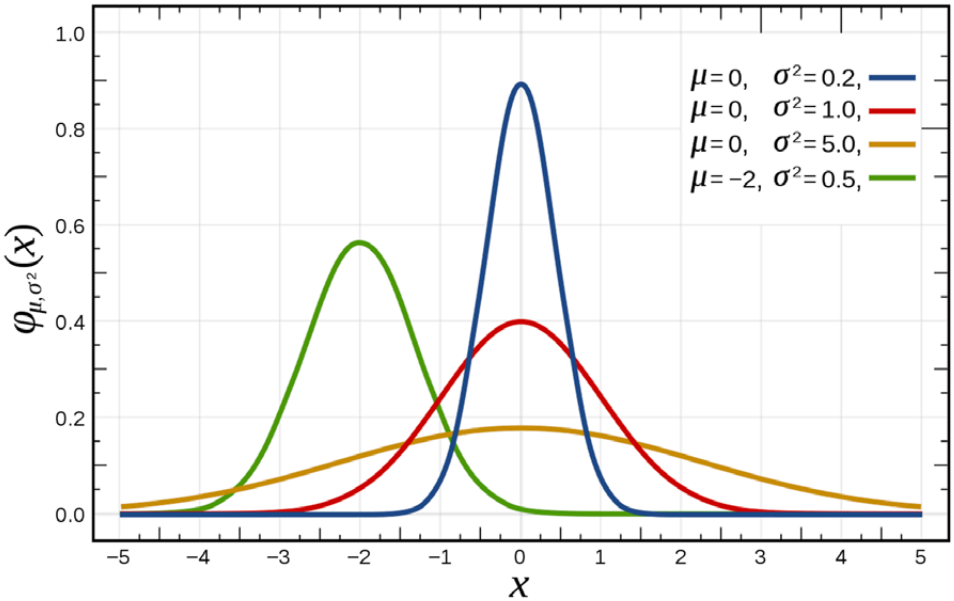


Figure 1. Examples of normal distributions (By Inductiveload – self-made, Mathematica, Inkscape, Public Domain, https://commons.wikimedia.org/w/index.php?curid=3817954).

Therefore, when we are designing learning experiences, it is likely that we are designing for the majority of participants who sit close to the mean. This heightened attention to the mean is not a long stride away from the colonial notion of prioritising for the *greater good* (Hayes & Heit, 2018; Haykin, 2011; Mallon, 2019; Menzies, 2014). As our eyes track away from the tails of the distribution, the lower likelihood of reoccurrence, the smaller magnitudes, and defined confidence levels reassure us that those events are less worthy of attention in a predicable *normal* world.

However, due to rapid technological developments, exponential demographic change, global mobility, ecological disasters, and geopolitical trends that disrupt our lives at an ever-increasing rate, our future seems better described in the notion of a *VUCA World* than a *Normal World* (Hadar et al., 2020). The acronym 'VUCA' was first developed by the US War College to define conditions military leaders were encountering in the modern battlefield, but is now more widely used in leadership and management (Horney et al., 2010). The acronym refers to the characteristics of *Volatility* (the nature, speed, and volume of change); *Uncertainty* (the unpredictability of issues and events); *Complexity* (the interdependence of issues and surrounding factors); and *Ambiguity* (the multiple ways that conditions can be interpreted) (Cousins, 2018). With an increasingly VUCA world, we are also likely to encounter more extreme events than can be explained by the small tails of a normal distribution. We are perhaps heading towards a world better described by a Pareto distribution – a *Paretian World* (Hagel, 2007).

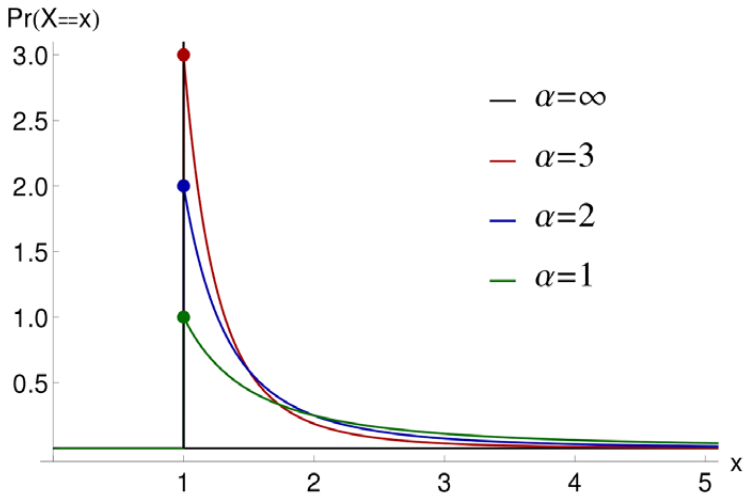


Figure 2. Examples of Pareto distributions (Danvildanvil, CC BY-SA 3.0, https://creativecommons.org/licenses/by-sa/3.0, via Wikimedia Commons).

Figure 2 demonstrates that a Pareto distribution differs fundamentally from the Gaussian normal distribution we are so enamoured with. While popularised by the well-known heuristic of the 80/20 rule (Juran, 2005), the origins of the Pareto distribution comes from the work of Villfredo Pareto in the late 1800s (Koch, 2011). Pareto distributions are power-law probability distributions which describe the relationship between two quantities where a change in one quantity results in a proportional change in the other (Hagel, 2007). Pareto's distribution was initially used to describe the distribution of wealth where a large proportion of the total wealth (80 per cent) is held by a small proportion of the population (20 per cent) (Newman, 2005). It has been found useful in describing phenomena such as social change, quality control, project management, and geophysical events such as earthquakes. McKelvey and Andriani (2005) describe the two approaches as differing radically.

Firstly, Gaussian distributions assume independence between the events. For us looking to the future, this means we would have to accept that the likelihood of one event has no impact on the likelihood or magnitude of another, and that there is no cumulative effect. In contrast, a Pareto distribution assumes that events are interrelated and cumulative. Not only are they interrelated but the relationship is fractal (Shirky, 2011). This fractal relationship means that the phenomena scales across the distribution and is apparent at any scale. For example, connectedness in social networks demonstrates a very high proportion of connections coalescing with a relatively small number of highly connected individuals. If we look at the subgroup of highly connected individuals, the same power law applies to the proportion of connections coalescing with a relatively small number of individuals within that highly connected group (Watts & Strogatz, 1998). This pattern repeats fractally.

Secondly, Gaussian distribution is characterised by its mean and variance, while Paretian distribution does not show a stable mean or variance. Paretian distributions have no meaningful average that can be assumed to represent the typical features of the distribution and no finite standard deviations upon which to base confidence intervals. Our eyes track to the tails of the distribution, not because we want reassurance of their insignificance, but because in the *fat tails* of Paretian distribution, extreme events are exposed as much more significant (Snowden, 2011).

The intent of this work is not to provide a mathematical analysis, but rather a more heuristic comparison of these two approaches in relation to learning design. It is clear that as designers of learning, if we always assume a normal distribution when planning for the future, we will underestimate the potential likelihood or magnitude of *tail events*.

So what are the implications for designing learning as we shift towards an increasingly VUCA world? McKelvey and Andriani (2005) contest that "No statistical findings … should be accepted if they gain significance by some assumption device by which extreme events and infinite variance are left out of the mix" (p. 226). Therefore, whether as a statistical technique or a helpful heuristic, Pareto shines a light on the highly improbable (VUCA) events to which we are becoming increasingly exposed if our visions of the future are induced by data or insights from the past.

THE FLAWS OF INDUCTIVE REASONING

When interpreting current and past events to draw inference about future events we are applying inductive reasoning (Haynes & Heit, 2018). Inductive reasoning is when "theories are formulated by drawing general inferences from particulars or cases of empirical data" (McAbee et al., 2017, p. 278). In a learning design context, it is the manner in which we use insights from past learning to inform the design of future learning. One issue with the application of inductive reasoning has been described as Hume's Problem, after the Scottish enlightenment philosopher, David Hume. In his *A Treatise of Human Nature*, he disassembles the basic assumptions of induction:

> … there is nothing in any object, consider'd in itself, which can afford us a reason for drawing a conclusion beyond it; and, That even after the observation of the frequent or constant conjunction of objects, we have no reason to draw any inference concerning any object beyond those of which we have had experience. (Hume, 1882, p. 436)

Yet, when generating design insights or developing strategy, data from past events and experiences tends to shape forecasts and design. By Hume's assertion, neither the frequency nor magnitude of past events or trends provide any certainty of them being representative or predicative of the future. Another issue with our dependence on inductive reasoning is that it creates epistemological bias (Hayes & Heit, 2018). The experience, data and process of interpretation caries perspectives and values from specific world views. The *priori* given to one world view over another represents a level of epistemological injustice, where some systems of knowledge are not equitably recognised (Fricker, 2013). Taleb (2008) describes this injustice as the "Great Turkey Problem" (p. 93); inductive reasoning would provide the Christmas Turkey with significantly different insights to the future than it would provide the butcher!

Greenfield (2020) provides a poignant example of this in highlighting how easily forecast the economic impact of the breakdown of planetary systems has been. Food failures, country debt defaults, failed states, wars, famine, pandemics, disease, mass migration, and mass extinctions are all more predicable if your inductive reasoning is based on observations and experience from a planetary systems perspective rather than through financial markets (referring directly to Taleb's prior career). Significant world events are epistemologically opaque from one world view, and transparent from another.

Not only are we exposed to uncertainty through over reliance on Gaussian thinking, but even when we recognise the higher probability of extreme events in a Paretian world, we are still subject to epistemic and philosophical biases which may render us blind to significant aspects of the future, blind to the potential damage of the highly improbable.

THE DESTRUCTIVE IMPACT OF THE HIGHLY IMPROBABLE – BLACK SWANS

Throughout history we have been challenged by the impact of the highly improbable. Through our own fragility, these events have exposed us to significant harm. Nassim Taleb describes these events as Black Swans in reference to the once widely held western belief that all swans were white. The capitalisation of Black Swan was adopted by Taleb to signify the difference between the birds in the metaphor from the events he was describing (Taleb, 2008). Despite centuries of reinforcement, it only took one sighting of a black swan to destroy that belief system. Black Swans are the unknown unknowns (Sutton et al., 2019). Black Swans share a trifecta of characteristics. Firstly, these extreme events are outliers from our usual expectations. Secondly, they create an extreme impact. Thirdly, they are retrospectively explainable and predicable (Taleb, 2008).

Many of the events commonly referred to as Black Swans emerge from our economic systems, noting of course the complex relationships between our economic life and other aspects. For example, the impact of hyperinflation in Germany post the First World War contributing to the conditions for the rise of Nazism, the bursting of the Dot Com Bubble in 2000, the post 9/11 market crash, and the 2008 Global Financial Crisis (Phadnis et al., 2021; Roselli, 2021; Sengupta, 2020). Other Black Swans include natural disasters such as earthquakes and hurricanes (Hobbs, 2019). However, it is not necessarily the physical or economic effects that determine the impact of a Black Swan. An example of the ugly social and cultural aspects of these natural disasters is all too visible in the vile racism of Strom's account of Hurricane Katrina (Strom, 2016). It is perhaps on these intersections of social, economic, and environmental that the impact of the Black Swan is most acutely felt, and the learning designer has a responsibility to make a difference.

However, the extent to which Black Swans are completely unpredictable or unknown unknowns is highly subjective. As mentioned earlier, this is in some part due to the epistemic bias in the inductive reasoning we use to account for the future within learning design. The thing that we can and cannot see due to our own world views. Within the Tiriti-based context of Aotearoa New Zealand (Treaty of Waitangi) epistemic injustice is evident in situations where traditional Māori knowledge (Mātauraka Māori) is insufficiently considered as an input for inductive thinking. Weaving Mātaraka Māori into thinking may increase the likelihood that what otherwise will be considered a Black Swan event could be forecast (Gilbertson, 2019; Rangitauira, 2021). Traditional knowledge is storified in pūrākau (traditional stories) to carry it through generations in a culture with a strong oral tradition. Environmental knowledge can be embedded into such stories as a taniwha. Taniwha are creatures often depicted as guardians, and the pūrākau surrounding them provide some insight into events beyond human memory or most western notions of scientific record.

Very public examples, where Mātauraka Māori was ignored with significant detrimental effect, illustrate the importance of incorporating diverse knowledge into design and decision making (McConnell, 2019; Morgan, 2011). One example involves the flooding of a motorway construction site, which encroached upon the dwelling of the water Taniwha Karu Tahi, causing the route of the road to be diverted. This led to a politician's previous statements on the matter looking somewhat ill-informed and foolish. Local Councillor Michael Laws (2011) stated "Taniwha do not exist. They are cute, cuddly legends – a brown fairy-tale. They belong in the same realm as dragons, leprechauns and the fairies at the bottom of the garden" (para. 15). This proved to be a misguided and prejudiced belief, which contributed to poor decision making, and a large cost to the rate paying public. The second example involves the construction of a prison which continues to sink into a swamp despite all the best available engineering advice (Ngawha Prison). The site had earlier been identified by Iwi as the home of the taniwha, Takauere. The project overran by NZ$100 million. Whether we look upon taniwha as manifestations of complex phenomena that are not well understood within narrow constraints of reasoning, or timeless ancestral creatures guarding the well-being of the land, it seems wise to ensure that they are included in the data that informs our inductive processes. The same data and processes that we use as inputs for designing learning.

In summary, inductive reasoning is based on experience and data from the past. Philosophically this does not determine whether the events are more (or less) likely to happen again in the future. However, in practice, the likelihood of many events is to some extent predictable, particularly those of high previous frequency that sit near the apex of a normal distribution. The events which sit further from the apex are however far less predictable, and the normal distribution less relevant. Even when examined using *fat tailed* distributions like Pareto, inductive reasoning does not inform the likelihood or impact of the highly improbable events of a VUCA world. The potentially destructive impact of Black Swans remains at least partially an unknown unknown. This leaves a blind spot in learning design that is unlikely to adequately prepare learners for the range of futures they may face, or the capabilities required to turn something negative into a positive – from Black Swan to Green Swan.

THE REGENERATIVE IMPACT OF THE HIGHLY IMPROBABLE – GREEN SWANS

John Elkington (1998) is best known for establishing the concept of Triple Bottom Line (social, economic and environmental impact) as a cornerstone of responsible business. However, in 2018 he issued a recall on the concept (Elkington, 2018). The core reason for the recall being that the concept had not achieved the radical change intended. It had been adopted as an accounting mechanism for a balancing act of competing agenda within a business as usual context. The triple bottom line approach sat comfortably within a Gaussian normal world: it had not changed the DNA of capitalism. It had fallen short of its potential to create disruptive system level change. Inspired by Taleb's Black Swans, Elkington (2020) proposed the concept of *Green Swans* as an alternative means to transform capitalism. Green Swans are profound shifts that are generally catalysed by some other disruption such as Black Swans. Exponential progress is evident in social, environmental and economic domains in a manner more akin to a Paretian approach. The progress represents an integrated breakthrough at a system level.

The climate crisis that we currently face is arguably a Black Swan which has catalysed several Green Swans. Climate change has and will for some time to come, present us with some of the most wicked problems humans have faced. Wicked problems are complex problems which cannot be definitively described, and that do not have definitive and objective solutions (Rittel & Webber, 1973). A climate-related example is how we replace our current travel behaviour with something that addresses the challenges of the climate crisis. Green Swans that are emerging as solutions to this include the transformation of large fossil fuel companies to renewable energy companies and the subsequent reinforcing loop from the financial markets (Pickl, 2019; Van de Graaf, 2018), the rapid adoption of electric vehicles (Kumar & Alok, 2020), and the increased value placed on natural carbon sinks such as bio-diverse forests (Di Sacco et al., 2021). Three Green Swans born from one Black Swan, all interrelated and dependent. When viewed within the context of the COVID-19 pandemic which has reduced all forms of travel, and potentially primed the world population to be more plastic to change, we begin to see more alignment with the cumulative and inter-dependent perspective of a Paretian world. There is nothing normal or average about Green Swans.

Indeed, it could be said that the VUCA world of swans and continually disruptive change is the new normal. A world where we may experience temporary states of stability but should no longer expect to experience equilibrium or normal distributions. So, how do we design learning in order to be better equipped to respond to Black Swans with Green Swans?

FRAGILE – RESILIENT – ANTI-FRAGILE

We have already explored the relationship between likelihood of events and how we perceive our exposure to their negative impacts. However, this risk is based entirely on the inductive reasoning described earlier. The closer to the tail of either the normal distribution (if we remain wedded to it) or the Paretian distribution, the lower the number of data points and therefore the level of confidence we can have in the validity of the

prediction. An appropriate example of this is the increasing frequency at which we see one in one-hundred-year weather events (Naumann et al., 2018). Therefore, the risk of Black Swans is not something we can easily describe. However, the extent to which the event would adversely impact us, is more easily described. We can instead ask to what extent we are *Fragil*e to the event.

While fragility has technical meaning in a range of scientific contexts (Novikov et al., 2005), it is sufficient here to assume that when something is fragile it is easily broken when subjected to pressure or stress. A fragile system will likely exhibit extensive uniformity, have little tolerance for diverse conditions, be slow to change, intolerant of ambiguity, and dependent on predictability (Taleb, 2014). An example of fragile learning design might be the highly linear, content- and process-orientated designs implemented in higher education accountancy courses. Due to disruptive technological advancement, automation and changing client expectations, the required capabilities have shifted towards a more human centred business advisory role (Bowles et al., 2020). This has led to significant criticism of the existing courses, which seem slow to change. Major employers have stepped in to take responsibility for the training themselves (Havergal, 2015).

It seems at first that fragility may be the opposite of resilience or robustness. However, *resilience* has other implicit concepts that differentiate it from fragility. One definition of resilience is the rate at which a system returns to equilibrium following disturbance (Resilience and Sustainability, 2019). The higher education response to COVID-19 has provided examples of learning design which shows characteristics of resilience. For example, courses that have adopted a flipped classroom model with content and resources available online of pre-face-to-face sessions, will likely have adapted more easily to the challenges of lockdowns, when compared to their more traditional lecture-based equivalents. It would also be fair to assume that they will find it easier to bounce back to their normal mode post-lockdown (Mehta, 2020; Roy et al., 2020). This view assumes that a system has equilibrium conditions and a single state to bounce back to. Whereas fragility is based on being either stable or unstable. There is no notion of bouncing back to equilibrium, but rather moving through various states of stability and instability.

Robust, however, has a closer alignment with fragile. A robust system will withstand greater pressure or stress and hold its form. It is a system that is less likely to break. If we look to historical and traditional institutions or to deeply embedded tradition of disciplines, we see learning designs that have so much inertia that they just cannot be moved, even by high disruptive global events (Christensen & Eyring, 2011). Robust, however, is not the opposite of fragile in that it merely maintains the state of the system and does not change it in the opposite direction of fragility. To be the opposite, the system must be improved by the pressure and stress. This is what Taleb (2014) describes as *Antifragile – things that gain from disorder.*

Anti-fragility is the quality of a system that is stronger or better due to exposure to shocks, and disruption. At one level, it is the human body that gains strength rather than breaks from lifting weights in a gym. Taken a level further, it is the elite performance of Eliud Kipchoge running a marathon in under two hours after a life time of high altitude, fast-pace training (Joyner et al., 2020). In Taleb's persistent use of mythology, it is the Hydra which grows a second head when you cut one off. In technology, it is the artificial intelligence system that improves through errors rather than fails. In business, it is the fail fast entrepreneurial ecosystem, rather than the large bureaucratic organisation.

In learning design, we find examples of anti-fragile design when work-based learning is designed with heutagogical principles (Mann et al., 2017). If we look to Capable New Zealand, the work-based learning school of Otago Polytechnic, the high level of student-determined learning allows learners to maximise the learning available in disruptive circumstances, rather than be limited by them. For example, the Bachelor of Leadership for Change is a post-disciplinary bachelor's degree based on heutagogical principles and enables learners to shape their study around their desire to lead change. One student shaped their entire programme around developing the competences to avoid them being automated out of a job (again). Their learning experience was more valuable because of a highly disruptive force.

The wicked challenges we face as we work towards the United Nations Sustainable Development Goals (SDGs), offer opportunities for anti-fragile learning (Sustainable Development Solutions Network, n.d.). Some of the best examples of this are where the learning design incorporates a living lab approach (Graczyk, 2015; Leal Filho et al., 2020). Within the living lab approach, students are subjected to the impacts of sustainability challenges as members of the university community (the lab), they conduct research of projects to inform or implement solutions, which in turn influence longer term practice. The challenges, the lived experience, and the authentic outcomes all offer an enhanced learning experience rather than one diminished by the disruptive challenges. From my own practice, establishing a sustainability neighbourhood as a living lab where students have the support and freedom to work as a community to solve sustainability problems is well aligned with the concept of anti-fragile learning (Australasian Campuses Towards Sustainability, 2022).

Whatever the context, there is capability to embrace small failures due to unpredictable events and use them to improve the system; to empower learners to enhance their own learning, by addressing big challenges and learning from the process. Anti-fragility is the condition where there is benefit gained through an unpredictable and disruptive occurrence. In its most simple form, an anti-fragile system is a system that is good at learning.

CONCLUSION: ANTI-FRAGILE LEARNING

So, we have established that focussing attention on the apex of a normal distribution has limits in anticipating the challenges of the future. Those challenges are becoming increasingly VUCA, and our epistemic biases narrow our understanding of them. We know that Black Swans (and Taniwha) sit ready in the long tails of the distribution. We should therefore have diminishing confidence in our ability to predict what the future holds. We can however prepare by focussing on the extent to which we are fragile to these events.

As designers of learning we can address this on two levels. Firstly, we can look at the design of the learning experience itself and how fragile it might be to disruption. Secondly, we can look at the extent to which the learning outcomes are anti-fragile. For example, what extra learning have learners been able to access as a result of the pandemic? In other words, are we creating the opportunity for learners to be the creators of the Green Swans of the future?

If we look at heutagogical design, learners have significant control of both the design of the experience and the learning (Blaschke & Hase, 2016). This may offer us the opportunity to create anti-fragility on both levels. But is current practice well aligned with looking to the future in this way? If not, then as learning designers, we must reflect upon whether we are meeting our responsibilities to contribute to a thriving future – to activate the leadership potential of learning design.

Ray O'Brien is the Tumuaki o Toitū te Taiao or Head of Sustainability at the University of Otago. He has responsibility for delivering on their Sustainability Strategic Framework. This gets him involved with operations, teaching, research, and community engagement across the University. His research interests centre around the design of learning experiences that support learners in an increasingly complex and unpredictable future – designs that realise the leadership potential of learning designers.

https://orcid.org/0000-0001-6062-7719.

REFERENCES

Arthur, W. B. (1994). Inductive reasoning and bounded rationality. *The American Economic Review, 84*(2), 406–411. https://www.jstor.org/stable/2117868

Australasian Campuses Towards Sustainability. (2022). *University of Otago: He kāika toitu, he kāika ora: The sustainability neighbourhood.* Green Gown Awards Australasia 2021. https://ggaa.acts.asn.au/2021/bbb/otago-5/

Blaschke, L. M., & Hase, S. (2016). Heutagogy: A holistic framework for creating twenty-first-century self-determined learners. In B. Gros, Kinshuk, & M. Maina (Eds.), *The future of ubiquitous learning* (pp. 25–40). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-47724-3_2

Bowles, M., Ghosh, S., & Thomas, L. (2020). Future-proofing accounting professionals: Ensuring graduate employability and future readiness. . . *Future, 21*.

Christensen, C. M., & Eyring, H. J. (2011). *The innovative university: Changing the DNA of higher education from the inside out.* John Wiley & Sons.

Cousins, B. (2018). Design thinking: Organisational learning in VUCA environments. *Academy of Strategic Management Journal, 17*(2), 1–18. https://www.proquest.com/docview/2046108661?pq-origsite=gscholar&fromopenview=true

Di Sacco, A., Hardwick, K. A., Blakesley, D., Brancalion, P. H. S., Breman, E., Cecilio Rebola, L., Chomba, S., Dixon, K., Elliott, S., Ruyonga, G., Shaw, K., Smith, P., Smith, R. J., & Antonelli, A. (2021). Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits. *Global Change Biology, 27*(7), 1328–1348. https://doi.org/10.1111/gcb.15498

Elkington, J. (1998). *Cannibals with forks.* New Society Publishers. http://archive.org/details/cannibalswithfor00elki_0

Elkington, J. (2018, June 25). 25 years ago I coined the phrase "Triple Bottom Line." Here's why it's time to rethink it. *Harvard Business Review.* https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it

Elkington, J. (2020). *Green swans: The coming boom in regenerative capitalism*. Greenleaf Book Group.

Fricker, M. (2013). Epistemic justice as a condition of political freedom? *Synthese, 190*(7), 1317–1332. https://doi.org/10.1007/s11229-012-0227-3

Gilbertson, G. M. (2019, November 26). *Mātauranga Māori could help with climate issues action seminar told.* Stuff.

Graczyk, P. (2015). *Embedding a living lab approach at the University of Edinburgh.* University of Edinburgh.

Greenfield, O. (2020). *Black swans, economics, and the meaning of life.* Green Economy Coalition. https://www.greeneconomycoalition.org/news-and-resources/black-swans-economics-and-the-meaning-of-life

Hadar, L. L., Ergas, O., Alpert, B., & Ariav, T. (2020). Rethinking teacher education in a VUCA world: Student teachers' social-emotional competencies during the Covid-19 crisis. *European Journal of Teacher Education, 43*(4), 573–586. https://doi.org/10.1080/02619768.2020.1807513

Hagel, J. (2007). *The power of power laws.* Edge Perspectives with John Hagel. https://edgeperspectives.typepad.com/edge_perspectives/2007/05/the_power_of_po.html

Havergal, C. (2015, August 3). Ernst and Young drops degree classification threshold for graduate recruitment. *Times Higher Education (THE).* https://www.timeshighereducation.com/news/ernst-and-young-drops-degree-classification-threshold-graduate-recruitment

Hayes, B. K., & Heit, E. (2018). Inductive reasoning 2.0. *WIREs Cognitive Science, 9*(3), e1459. https://doi.org/10.1002/wcs.1459

Haykin, M. A. G. (2011). "Zeal to promote the common good": The story of the King James Bible. *Southern Baptists Journal of Theology, 15*(4), 18–29.

Hobbs, T. (2019, October 1). *Indonesian "Black Swan" quake: A painful reminder of last year's M 7.5 Palu shock*. Temblor.Net. https://temblor.net/earthquake-insights/indonesian-black-swan-quake-a-painful-reminder-of-last-years-m-7-5-palu-shock-9922/

Horney, N., Hefley, B., & O'Shea, T. (2010). Leadership agility: A business imperative for a VUCA world. *People and Strategy, 33*(4), 32–38.

Hume, D. (1882). *A Treatise of human nature: Being an attempt to introduce the experimental method of reasoning into moral subjects; And, dialogues concerning natural religion* (T. H. Green & T. H. Grose, Eds.). Longmans, Green. (Original work published 1739–40).

Joyner, M. J., Hunter, S. K., Lucia, A., & Jones, A. M. (2020). Physiology and fast marathons. *Journal of Applied Physiology, 128*(4), 1065–1068. https://doi.org/10.1152/japplphysiol.00793.2019

Juran, J. M. (2005). *Pareto, Lorenz, Cournot, Bernuolli, Juran and others*. In J. C. Wood & M. C. Wood (Eds.), *Joseph M. Juran: Critical evaluations in business and management.* Routledge.

Koch, R. (2011). *The 80/20 Principle: The Secret of achieving more with less: Updated 20th anniversary edition of the productivity and business classic*. Hachette UK.

Kumar, R. R., & Alok, K. (2020). Adoption of electric vehicle: A literature review and prospects for sustainability. *Journal of Cleaner Production,* 253, 119911. https://doi.org/10.1016/j.jclepro.2019.119911

Laws, M. (2011, June 17). Monsters and myths clog up tunnel and hold us back. *Stuff*. https://www.stuff.co.nz/sunday-star-times/columnists/5128989/Monsters-and-myths-clog-up-tunnel-and-hold-us-back

Leal Filho, W., Salvia, A. L., Pretorius, R. W., Brandli, L. L., Manolas, E., Alves, F., Azeiteiro, U., Rogers, J., Shiel, C., & Do Paco, A. (Eds.). (2020). *Universities as living labs for sustainable development: Supporting the implementation of the sustainable development goals*. Springer International Publishing. https://doi.org/10.1007/978-3-030-15604-6

Mallon, R. (2019). Scottish Presbyterianism and the national education debates, 1850–62. *Studies in Church History, 55*, 363–380. https://doi.org/10.1017/stc.2018.5

Mann, S., Ker, G., Eden-Mann, P., & O'Brien, R. (2017). Designing for heutagogy: An independent learning pathway approach. *Scope: Contemporary Research Topics (Flexible Learning), 2*, 59–70.

McAbee, S. T., Landis, R. S., & Burke, M. I. (2017). Inductive reasoning: The promise of big data. *Human Resource Management Review, 27*(2), 277–290. https://doi.org/10.1016/j.hrmr.2016.08.005

McConnell, J. (2019). The taniwha, moderation of our human pursuits. *Landfall, 237*, 4–9.

McKay, A. (2021, December 24). *Don't look up* [Film]. Hyperobject Industries, Province of British Columbia Production Services Tax Credit, Bluegrass Films.

McKelvey, B., & Andriani, P. (2005). Why Gaussian statistics are mostly wrong for strategic organization. *Strategic Organization, 3*(2), 219–228. https://doi.org/10.1177/1476127005052700

Mehta, C. M. (2020). Flipping out and digging in: Combining the flipped class and project-based learning to teach adult development. *The International Journal of Aging and Human Development, 91*(4), 362–372. https://doi.org/10.1177/0091415020919997

Menzies, H. (2014). *Reclaiming the commons for the common good*. New Society Publishers.

Morgan, K. (2011). *Heeding the taniwha can help avert expensive blunders*. New Zealand Herald. https://www.nzherald.co.nz/kahu/kepa-morgan-heeding-the-taniwha-can-help-avert-expensive-blunders/VNSRYM7XFPJA67HMNNZHHZ6TPI/

Naumann, G., Alfieri, L., Wyser, K., Mentaschi, L., Betts, R. A., Carrao, H., Spinoni, J., Vogt, J., & Feyen, L. (2018). Global changes in drought conditions under different levels of warming. *Geophysical Research Letters, 45*(7), 3285–3296. https://doi.org/10.1002/2017GL076521

Newman, M. (2005). Power laws, Pareto distributions and Zipf's law. *Contemporary Physics, 46*(5), 323–351. https://doi.org/10.1080/00107510500052444

Novikov, V. N., Ding, Y., & Sokolov, A. P. (2005). Correlation of fragility of supercooled liquids with elastic properties of glasses. *Physical Review E, 71*, 061501. https://doi.org/10.1103/PhysRevE.71.061501

Phadnis, C., Joshi, S., & Sharma, D. (2021). A study of the effect of Black Swan events on stock markets – and developing a model for predicting and responding to them. *Australasian Accounting Business and Finance Journal, 15*(1), 113–140. https://doi.org/10.14453/aabfj.v15i1.8

Pickl, M. J. (2019). The renewable energy strategies of oil majors – From oil to energy? *Energy Strategy Reviews, 26*, 100370. https://doi.org/10.1016/j.esr.2019.100370

Rangitauira, R. (2021, July 5). *Weaving mātauranga Māori and science can empower Aotearoa*. Sciblogs. https://sciblogs.co.nz/matau-taiao/2021/07/05/weaving-matauranga-maori-and-science-can-empower-aotearoa/

Resilience and sustainability [Editorial]. (2019). *Nature Sustainability, 2*(4), 249–249. https://doi.org/10.1038/s41893-019-0284-4

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*, 155–169. https://doi.org/10.1007/BF01405730

Roselli, A. (2021). Hyperinflation, depression, and the rise of Adolf Hitler. *Economic Affairs, 41*(2), 300–308. https://doi.org/10.1111/ecaf.12466

Roy, H., Ray, K., Saha, S., & Ghosal, A. K. (2020). A study on students' perceptions for online Zoom-app based flipped class sessions on anatomy organised during the lockdown period of COVID-19 epoch. *Journal of Clinical & Diagnostic Research, 14*(6), 1–4. https://doi.org/10.7860/JCDR/2020/44869.13797

Sengupta, I. (2020). An exhaustive study of the 'Black Swan' events in the financial markets. *Adhyayan: A Journal of Management Sciences, 10*(02), 22–35. https://doi.org/10.21567/adhyayan.v10i2.4

Shirky, C. (2011). *2011: What scientific concept would improve everybody's cognitive toolkit?* Edge. https://www.edge.org/response-detail/10413

Snowden, D. (2011, May 16). *Risk and Resilience* [Video]. YouTube. https://www.youtube.com/watch?v=2Hhu0ihG3kY

Strom, K. A. (2016). *Katrina and the black tsunami*. National Vanguard. https://nationalvanguard.org/2016/10/katrina-and-the-black-tsunami/

Sustainable Development Solutions Network. (n.d.). Retrieved 27 January 2022, from https://www.unsdsn.org/

Sutton, S. A., Paton, D., Buergelt, P., & Sagala, S. (2019, August 28–29). *Are we future ready? It depends on who you ask* [Paper Presentation]. AFAC/AIDR/IFE Conference, Melbourne, Australia. https://www.afac.com.au/events/proceedings

Taleb, N. N. (2008). *The black swan: The impact of the highly improbable*. Penguin UK.

Taleb, N. N. (2014). *Antifragile: Things that gain from disorder* (Random House Trade Paperback edition). Random House.

Van de Graaf, T. (2018). Battling for a shrinking market: Oil producers, the renewables revolution, and the risk of stranded assets. In D. Scholten (Ed.), *The geopolitics of renewables* (pp. 97–121). Springer International Publishing. https://doi.org/10.1007/978-3-319-67855-9_4

Watts, D. J., & Strogatz, S. H. (1998). Collective dynamics of 'small-world' networks. *Nature, 393*(6684), 440–442. https://doi.org/10.1038/30918

Article

doi.org/10.34074/scop.6003002

BRICOLAGE AS A METHOD IN PROFESSIONAL PRACTICE

Martin Andrew and Mawera Karetai

INTRODUCING BRICOLAGE

This paper explores bricolage as a qualitative approach to research. Imbued by the broadly linguistic 'bricolage' described by Lévi-Strauss (1962), modern bricolage, as a qualitative research methodology, is best defined by Denzin and Lincoln (2005) as "a complex, dense, reflexive collage-like creation that represents the researcher's images, understandings and interpretations of the world or phenomenon under analysis" (p. 6). It is now regarded as a methodology for professional practice research, including creative studies. It seeks to free bricolage from charges of being "undisciplined" (Roberts, 2018, p. 1), mix-and-match and random (Kincheloe, 2001), and even schizophrenic (Deleuze & Guattari, 1987). Our exploration focuses on several features of the methodology: its ability to incorporate and allow eclecticism, multiplicity and diversity of practice; its alignment with a transdisciplinary approach, and its concordance with a portfolio method of curating collections of outputs. As a methodology of emergence, it is tolerant of the stop-start nature of practitioner research we recognise from the tenuous age of COVID-19. It holds possibilities for learners and for mentors.

As well as accommodating the emergence that resilient methodologies need in the COVID era, bricolage is eclectic and autoethnographic and enables creative sense-making. This feature shows in bricolage's potential to embody the multiple journeys and lived contributions of a single practitioner or collaborator. It allows learners and mentors to recognise that a professional practitioner seldom does just one thing. One feature of the bricoleur's practice is that bricoleurs put "something of [themselves] into it" (Lévi-Strauss, 1962, p. 21). This acknowledges the thread of the self and the subjective in research writing.

Emphasising the role of autoethnography in professional practice, Denshire (2014) wrote: "autoethnographers will often blur boundaries, crafting fictions and other ways of being true in the interests of rewriting selves in the social world" (p. 831). These acts of blurring, crafting and reconfiguring, however, require critical reflectivity to extend personal-professional understanding into sociologically-oriented professional knowing. In other words, learners and mentors need to be clear that bricolage as a method of professional practice may require a context (con-text, an accompanying text) that explicitly and critically makes sense of its component parts.

How this criticality manifests itself in bricolage is one concern of this exploration. First, we discuss the charge of randomness levelled against bricolage; then we consider the role of multiplicity in bricolage as it may be applied to professional practice. Then, we explore how it might operate within a transdisciplinary approach. This leads into the issue of portfolios as repositories of a bricoleur's artefacts/textuality. This means bricoleurs may use portfolios as methods of presenting different components of the thesis. We also discuss the autoethnographic dimension as a means of allowing experienced professional narratives into bricolage. At the end, we offer a completed doctoral learner's narrative of the lived experience of being and becoming a bricoleur as a case study of a bricoleur-practitioner.

BRICOLAGE: BEYOND RANDOMNESS

Recent studies of bricolage in such areas as arts-based research and social and human sciences rehabilitate the method from a reputation for randomness, fragmentation and pastiche by indicating its multi-perspectival nature (Kincheloe, 2001). Lévi-Strauss (1962) had called the bricoleur a 'Jack-of-all-trades' whose method involves using whatever is handy, "creating structures by means of events" (p. 15) while the scientist creates 'events' via 'structures.' In recent years, this polarity has broken down to the extent that today bricolage denotes potentially mixed-method processes and the multi-textual and multi-vocal media of communication employed by bricoleur researchers in such areas as community welfare (Phillimore et al., 2018; Roberts, 2018). Lévi-Strauss conceded that both the scientist and the bricoleur create knowledge from *prior knowing,* giving the example of the Elizabethan miniaturist having to investigate the history and authenticity of the lace collars they paint. Further, the deliberateness and strategic planning Lévi-Strauss attributed to the scientist coexist with random handiness, allowing for either the positive serendipity or negative unexpectedness that may confront professional practitioners in our era of epistemological uncertainty and methodological pivoting.

In the era of COVID-19, bricolage offers learners and their mentors the flexibility and contextual contingency needed to make, create, curate and/or write professional practice research: the ability to use as 'data' materials at hand, including one's own experiences and practices. Bricolage has other features: it accords with the transdisciplinary turn in solving wicked problems among multiple stakeholders; it offers a multi-perspectival discourse, meaning the views and voices of many across the world can be in the mix, and it understands the continually evolving processes and practice of complex real-world problems (Yardley, 2019).

EMERGENCE AND PRIORITY

The tension between *emergence* and *priority* in bricolage requires ongoing exploration for professional practice learners and their mentors. Because *emergence* is one of the characteristics of bricolage, there is the same need to capture acts of becoming in a reflective form – diary, log, spoken memorandum – as there is in professional practice. The need to reflect on incidents of practice in action for future scrutiny and eventual understanding means the practitioner needs to capture data for the enquiry as geographically and chronologically close to the incident as possible. This quality of *emergence* is what makes a bricolage hard to define as an *a priori* project (a priority, something coming before) as may be required by a probation panel if a doctoral candidate professes to be a bricoleur. Bricolage is not monological; indeed, it is it multi-logical and even multi-methodological (Kincheloe, 2001).

Crouch (2017) writes: "bricolage may be about 'getting by', but it may also be able to render tackling situations, in however much detail and nuance they may assert, require, or happen" (p. 1). This observation aligns with the reflective recording of critical events in professional practice. Bricolage has the potential to see into the cracks of everyday professional living and becoming. Reflective journals may be one key method for learners to explore such cracks. It is *how* the bricoleur enables elements of knowing to emerge that matters. To borrow from Lévi-Strauss (1962), the learner-as-bricoleur puts things together in new and 'devious' ways – fashioning, linking, assembling, curating, showcasing – making portfolios. Bricolage allows learner-practitioner knowledge to be provisional without requiring a privileged reference point. Denzin and Lincoln (2011, pp. 681–682) opened up bricolage as a fresh material and ethnographic approach in qualitative methodology:

> The material practices of qualitative enquiry turn the researcher into a methodological (and epistemological) *bricoleur.* This person is an artist, a quilt maker, a skilled craftsperson, a maker of montages and collages. The interpretive *bricoleur* can interview; observe; study material culture; think within and beyond visual methods; write poetry, fiction, and autoethnography; construct narratives that tell explanatory stories; use qualitative computer software; do text-based inquiries; [use] focus group interviews; and even engage in applied ethnography and policy formulation.

Applying the insights of Denzin and Lincoln (2011), we describe bricolage in relation to conventional methods. The spirit of bricoleur disputes *already-given* methods, preferring instead to seek the *most appropriate* method of portraying any particular aspect of the emerging portfolio.

Essentially, the learner-bricoleur must have a sense of the shape and form of the whole to which the parts belong, a design; a strategy. Within this holistic frame is the work of the magpie, as Stewart writes in an online study: "the bricoleur appropriates available methods, strategies and empirical materials or invents or pieces together new tools as necessary" (2001). Stewart (2001) emphasises that whatever is presented as bricolage for audience, assessment or evaluation will be complex, dense and reflexive. It will represent learner-practitioners' stories, as well as reflecting their understandings and interpretations of the world (Campbell & McNamara, 2007). Thus, it brings the phenomena under investigation into new light and contributes to ongoing conversations and scholarship. In this light, it is worth investigating how a transdisciplinary approach might accommodate a bricolage methodology for learners and mentors.

THE MULTIPLICITY OF PROFESSIONAL PRACTICE LEARNING

Multiplicity is a feature of the professional practice contexts of many learners undertaking work-based learning, such as that of Mawera, whose narrative concludes this article. Their generative or creative work is unlikely to have merely one single thread; one form, one genre. Embracing formal and structural multiplicity characterises many professional practice learners such as those in critical social practice, educational and curricular writing, organisational communications, marketing, culinary arts and design. These works of textural or artefact multiplicity, where the research output comprises a portfolio corresponding to the strands of practice, lend themselves to the methodology of the bricoleur, 'bricolage'.

To show how learners in creative and professional practice have already employed bricolage, we present some examples, all pseudonyms and composites, but based on actual completed learner profiles from the first author's experience:

- Jeanette creates sculpted gardens and public sculptures out of a range of meaningful materials and for a range of cultural groups.
- Karen is a creator of in-house communications for an organisation, and her professional practice envelops a range of social impact and creative domains, and notes how bricolage is used in organisational studies.
- Maria is a contributor to regional civics with stories for multiple areas of impact, from the cultural and the ecological to the socio-political and the economic. Bricolage is now a key method used in interpretative sociology.
- Arthur is a respected media commentator who operates across print, radio and video and covers a range of subjects, largely those with social impact.
- Robert is a culinary artist whose curated banquet incorporates a range of eclectic dishes of regional, cultural and historical significance, each of which corresponds to an aspect of his multiple whakapapa.
- Ian is a creative marketer, whose productions incorporate the written, the visual, the filmic and the auditory, both in isolation and combination, and whose portfolio represents forms generated for a gamut of visionary stakeholders.
- Jill creates and curates educational content and materials for online educational programmes, but also works in print, which incorporates such texts as YouTube videos, pamphlets, books and posters.

Adding to the complexity is the fact that in many cases these learner-practitioner-researchers work within teams or collaborate with others or for stakeholders/clients. In these cases, in order to capture the complexity of these learners' professional practice and their roles in a generative process, a broad methodology affording a multiplicity of ways of doing, making and thinking is required. Bricolage is one such methodology.

ALIGNMENT WITH TRANSDISCIPLINARITY

Professional practice, as a discipline allied to work-based learning, and a transdisciplinary approach to enquiry have in common an orientation towards understanding contemporary problems *in evolution* and generating *possibilities* for practical application. These possibilities may or may not end up contributing towards *solutions.* In a transdisciplinary approach, bricolage may be conceived as Stewart (2001, p. 4) saw it: "a pieced together, close-knit set of practices providing possible solutions to a problem in a concrete situation." In other words, a 'solution' can come from multiple projects integrated towards understanding one phenomenon.

A key difference is that transdisciplinarity allows the impetus towards 'solutions' to no longer be essential in research: progress *towards* 'action' is sufficient. This can mean that the positivist urge to solve and prove is out of the picture; instead there is a desire to enquire into, come to understand, and contribute to comprehending complexity, including understanding one's own practice. In a professional nursing research context, de Campos and Ribeiro (2017, p. 3) write: "*bricolage* is elevated due to its characteristic of freedom provided to the researcher, accepting his or her connection with the studied object." There is care and rigour in the investigation, collection and curation of its components and in its method of representation as an entirety – within a frame, a portfolio, a room, a URL. Defining these parameters is the methodical work of the bricoleur. Bricolage potentially affords, Rogers (2012, p. 12) argues, "the plurality and complex political dimensions of knowledge work."

Bricolage deviates from the transdisciplinary approach in that it carries within its fabric the potential to challenge readers/audiences by employing unexpected, irregular or offbeat methods of representation (Wibberley, 2017). The multiple contents of the portfolio comprise various media and forms, any of which may evolve through its own method.

BRICOLAGE AS PORTFOLIO

Although 'found data' generated through a deliberate act of seeking and finding – the etymological heart of 'bricolage' – remains the most famous method of bricolage, a more generative facet can be seen in its use of extended metaphors and symbols which stand for the process of creativity. *Weaving,* as in indigenous methods, is the most universal metaphor (Wibberley, 2017); those of the *mosaic* and the *patchwork,* perhaps, run second and third. In kaupapa Māori, the *kete* may both comprise and contain combinations and multiplicity; the processes of its making and its contents, like process and product in autoethnography, are not logically separable. The kete is understood as a researched set of resources (Jefferies & Kennedy, 2009); as a form of portfolio.

It is valuable for learners and mentors to see that the bricolage method is concordant with a portfolio method of evaluation or assessment, such as that used in visual arts, or creative writing; or in health and social sciences where the portfolio represents evidence of contribution to a range of actions and discourses. It is a kind of collected works, with rigour coming in part from volume of evidence, diversity of discourse and versatility of practice, and partly from the necessity of incorporating reflection (Romova & Andrew, 2011). It creates entireties from bite-sized data chunks both discovered, created and generated through creating innovations. Bricolage effectively applies the *already-known* to the *not-yet-known.* It is possible for a thesis in professional practice as in creative industries to include fiction, poetry, drama and/or visual imagery alongside critical and reflective representations of practice, which are often but not always in a written form. This written form may be considered the professional or academic thread, contributing to the readability of the work.

In professional practice thesis writing, 'the text' can become an authentic record of the multiple facets of an individual's practice. Learners and mentors can conceive that potentially such a text might incorporate such authentic forms as critical incident reports, case or field notes, vignettes, accounts of meetings or other multivocal events, anecdotes and reflections on any of the above or for the explicit purpose of reflective practice as a professional development or enquiry activity. All of these forms are qualitative and interpretative in

that they present feelings, responses, attitudes, perceptions and experiences, and so are grounded in personal convictions and subjective readings of actuality. In other words, they are both ethnographic and narrative, and their underpinning methodology is autoethnographic.

There is nothing in our exploration of bricolage that lessens the criticality and rigour of the method as it pulls together 'art' and 'science' in a unifying way, in the interests, Holman Jones (2005) wrote, of generating analytical, accessible texts that change us, our world and its environments "for the better" (p. 274). Importantly for learners and mentors, bricolage creates new meaning by building on existing scholarship, professional practice and evidence. This evidence can take the form of traditional literature and contextual reviews, or of the genre of secondary data, which includes such in-house documents as policy and contractual documents, mission statements and annual reports, agendas and affirmed records of meetings; any artefact contributing to the culture of the workplace, organisation, community or 'site of practice.' In some professional practice cases, bricolage is valuable for creating thick descriptions of sites of practice (Ellis, Adams, & Bochner, 2011). The purpose of this, Jorgenson (2002) wrote in the context of understanding an engineering practice environment, was to enable insiders and outsiders alike to understand a culture. For learners and mentors of professional practice work, the methods used to generate and discern patterns of experience included field notes, interviews, and/or artifacts, which can be analysed inductively to listen for recurrent events, feelings, narrative threads, all of which can be told as themes.

Bricolage allows for the multiplicity that characterises many learners' practice. There may be multiple sites of practice because bricoleurs are practitioners of diversity and their impact may be felt in many contexts and evidenced by multiple forms of textuality. Bricolage can also be immersive, so it works as a method for those in passion work, from artists and composers to social activists to social workers and nurses, deeply involved in the affective domains of their individual practices. Within those affective domains are *others* who have feelings, experiences and identities, and it becomes the ethical curatorial work of the bricoleur to be responsible for the representation of others' identities and voices. These identities and voices can be formally heard, gathered and arranged through a range of collection methods such as interviews, focus groups, picture elicitations and narrative frames.

BRICOLAGE AS RETELLING AUTOETHNOGRAPHIC STORIES

The process of representing others, and the implicitness of the 'I' in such representations, can occur through autoethnographic methods, where representation of others happens by way of representing the story of the autoethnographer, where stories may be told or retold on a spectrum from *close account* to *fictionalisation* (Andrew & Le Rossignol, 2017). It can also come from the bricolage method of collecting and curating authentic stories which may vary from raw to safe narrative recreations (Campbell & McNamara, 2007). The ethical imperative of writing, or representing, nothing that may harm readers present or future through its being recognisable, is a given. Ellis, Adams and Bochner (2011) remind us that when we conduct and write research, we implicate others in our work and must abide by codes of relational ethics (Ellis, 2007). The ethics of bricolage require the same tenets as autoethnography (Tolich, 2010).

The 'text' of the bricoleur may be described in autoethnographic terms. Such texts may be stories curated by what Ellis (2004) called *"the autoethnographic 'I'"*; or, in portfolio terms, a curated collection of framed and represented artefacts, each labelled and annotated to demonstrate critically the contribution of each part to the whole. For the creative or academic writer, the subgenre of the subjective academic narrative is a useful conception (Arnold, 2014, 2015), since it affords and allows multiplicity and understands that what is represented occurs through the subjective lens of the creator, who is also the generator. In other words, both the methods of coming to understand and of representing are the work of the autoethnographic 'I.' In professional practice work, we can understand this subgenre, this mode of representing enquiry, as subjective professional narrative.

More specifically, 'subjective' refers to self and self-understanding as data; 'academic' denotes the privileged intellectual discourse adding to a scholarly conversation, and 'narrative' indicates that all writing that creates knowing participates in a process of storying (Arnold, 2014). There may be overlap between process and product, a feature Ellis, Adams and Bochner (2011) identify as a feature of autoethnography.

CRITICALITY VIA REFLECTION IN BRICOLAGE

The reflexivity as well as the 'unfolding' emergence that bricolage allows mark it as appropriate for professional practice enquiry capable of challenging "systems and bias" (Johns, 2020, p. 149). Nursing practitioner Johns (2020) mainstages bricolage in a book-length study of narrative reflexive methodology, emphasising its potential to capture the synchronous and the diverse. The emancipatory potential of bricolage is writ large: "in adopting bricolage, the researcher responds to the complexity of self-inquiry and the lived world" (Johns, 2020, p. 19). This adoption, Johns writes, enables researchers to move beyond the demands of any particular methodology, absolving themselves of the need to conform to its rules. The creative process informing a work/text will have its own method, and application of methods will be rigorous. Emphatically, the bricoleur maintains a reflective diary in any form in order to capture the emergent and iterative learnings observed from applying and enacting methods over time.

In professional practice, the dimension of reflectivity must be recorded with discipline and rigour. If process and product are intertwined on the helix of autoethnography, as Ellis, Adam and Bochner (2011) emphasised, then the 'how' and 'why' knowledge processes are best accessed via a reflective form, often a written or spoken word journal. Reflective practice is a core method in the mix (Schön, 1983). As the bricoleur as professional practitioner confronts dilemmas that disorient or are new, unexpected or challenging, reflective learning processes are enacted because they afford professionals the chance to acquire new knowledge and skills for the situation should it recur (Mann et al., 2009). This is the key method for ensuring criticality within the work of the professional practitioner as bricoleur.

Then, once the assemblance is in place, the practitioner can re-examine the product and the processes behind it from a reader's or viewer's point of view, generating critical knowing in the spaces of reflection *on, in* and *for* action (Schön, 1983). At the same time, practitioners reconsider brushes with the unfamiliar, the unforeseen, the perplexing and the destabilising. This is Dewey's 'disequilibrium,' a state we confront in gaining new knowing. We encounter, Dewey (1916/1944) wrote, situations whose "whole full character is not yet determined" (p. 150). Yearning for balance from disequilibrium leads to critical learning via reflection. This process of enquiry affords criticality in bricolage too, as it must in professional practice research.

Before this study concludes, we introduce the narrative reflection of a completed learner on the Doctor of Professional Practice and a professed bricoleur. This narrative exemplifies some of the way that the elements of bricolage operate in authentic practice spaces as a medium for liberatory praxis.

BRICOLAGE IN ACTION: A LEARNER REFLECTION

Imagine you have a celebration coming up, and for weeks you have been planning an incredible cake to serve to your guests. But there is a problem: you can't find a recipe that will give you the outcome you are looking for, and there is a global pandemic happening at that time, so some of the ingredients you would usually use are not available. You have choices. Do you (a) give up on the vision you had, and go with someone else's recipe, or do you (b) adapt your plan to the resources you have and create something authentically you, with what you have on hand? If you chose (b), welcome to the bricoleur club!

When Lévi-Strauss described the bricoleur in *The Savage Mind* (1962), he painted a picture of a capable, creative, problem solver who has amassed a collection of useful skills learned from practice, that they could adapt, to help them achieve their objectives. The bricoleur does not concern themselves with the rules around the traditional use of a tool, they concern themselves with the job at hand and the tools they have do it.

My name is Mawera, and I am a bricoleur. I am not a traditional academic, even when I try hard to be one (how I perceive them to be). High school was not a great experience for me, and at times I have found tertiary learning a struggle. Some people seem to have a knack for following the rules set down by others and conform with ease. I missed out on that gene, and the absence of it has been the cause of much conflict in my life.

Through my formal education journey, my brain has always looked for signs of what Roger Waters wrote as "thought control" in the 1979 song, "Another Brick in the Wall." Where I see control, I rebel against it. Education should be enabling, not controlling. People should be enabled, not controlled. Yes, there are some conventions that we can't push back against – if we seek to obtain recognition for knowledge and experience, we need to produce something that can be measured against a standard. But how we get to that place has traditionally been set in stone, and that stone can be a barrier for learners. Our system of education and educational assessment were designed by a dominant culture, for its own members. It has been a system of oppression for learners who exist outside of the dominant culture. I am one of those learners.

I am a 50-year-old wahine mau moko and a lifelong learner. I want to learn more and incorporate that learning into my practice, but I cannot thrive in a place where what I know is less relevant than how well I conform. Bricolage has enabled me. Bricolage as a method has allowed me to bring all that I know, and all that I am on the academic journey. It has valued my lived experience, my areas of endeavour, my practice, and my voice, in its many forms. It has allowed me to bridge over the rules and conventions of traditional academia, that would have stopped me from achieving my goals. Using bricolage as a method, I have been able to express my authentic self, and have produced work that I feel proud of. I have been able to reflect on my life of service and share ideas with others.

CONCLUSION

The methodology known as 'bricolage' has vast potential for creative mentors comfortable with non-fixedness and those open to the possibilities that transdisciplinarity holds for addressing wicked problems. It is a methodology that accommodates the unpredictability of the COVID-19 era. It has value for learners in professional practice whose practice has multiple tentacles and may benefit from a portfolio or repository mode of presentation. Bricolage, we have started to show, has moved beyond its early sense of *making do* with collected objects and carries with it a range of potentialities that render it a valuable strategy for the practitioner portfolio/ thesis. Among these positive facets are:

- its potential to allow multiplicity, eclecticism and diversity in practice;
- its alignment with a transdisciplinary approach, and to afford the 'who' and not just the 'what';
- its applicability to curate a material portfolio method of presenting collections of outputs that is strategic, not merely 'mix-and-match';
- its capability to embody and encourage reflectivity and line up with the critical impetus;
- its non-instrumentalist ability to allow for poetic and liberatory praxis, both in terms of operating in a social change and sustainability space, and its ability to free researchers from the bonds of conventions that are not validating creativity.
- its capacity for affirming authenticity within real world professional practice contexts.

This article explores the potential of bricolage as a methodology for professional practice. It suggests mentors need to understand that bricolage is a useful methodology for curating the multiple, eclectic and emergent texts of some professional practitioners. However, mentors need also to be wary that such curation must necessarily be accompanied by critical reflection. As we move into an increasingly uncertain COVID-era period, the spaces of interpretative and spatial bricolage, further off-chutes of the bricolage discussed here, have the potential to inform professional practice (Roberts, 2018). Mentors and learners can view bricolage as a methodology of possibility, emergence and authenticity. We close with our learner's haiku:

A bricolage
allows my authentic voice
my knowledge counts.

Martin Andrew operates as a creative mentor in postgraduate programmes, including Master and Doctorate degrees in Professional Practice. Prior to his four to five years supporting the College of Work Based Learning in Otago, New Zealand, he had sojourned away from his hometown of Ōtepoti/Dunedin with two honorary posts at Melbourne universities in Creative Industries and Transnational Education (TNE). His work and research have become increasingly focussed on doctorate education and supporting learners to reach their own personal best through critically reflective practice and writing. A trans-disciplinarian, he emphasises that his past disciplines have included Education, Drama, Linguistics and Writing, Creative and otherwise. He holds honorary positions in Australia, Vietnam and Indonesia.

https://orcid.org/0000-0002-0108-5195

Educator, facilitator, governor, entrepreneur, and mediator, **Mawera Karetai** brings a diverse perspective to her communities. Mawera's research interests are in education, environment, and social justice. Her current work is in identifying barriers to success in education, particularly for those who are marginalised and discriminated against. Based in Whakatāne, Mawera is active in te ao Māori and enjoys working with groups to build relationships and capabilities.

https://orcid.org/0000-0002-9646-0962

REFERENCES

Andrew, M., & Le Rossignol, R. (2017). Autoethnographic writing inside and outside the academy and ethics, *Writing and Pedagogy, 9*(2), 225–249.

Arnold, J. (2014). A subjective academic narrative reviewing academic collegiality. *International Education Research, 2*(4), 26–37.

Arnold, J. (2015). Creativity within the academy: A subjective academic narrative. *International Journal of Learning, Teaching and Educational Research, 10*(1), 157–171. https://www.ijlter.org/index.php/ijlter/article/view/222

Campbell, A., & McNamara, O. (2007). Ways of telling: The use of practitioners' stories. In A. Campbell, & S. Groundwater-Smith (Eds.). *An ethical approach to practitioner research* (pp. 99–112). Routledge.

Crouch, D. (2017). Bricolage, poetics, spacing. *Humanities, 6,* 1–7. https://doi.org/10.3390/h6040095

De Campos, L. R. G., & Ribiero, M. R. R. (2017). The bricolage method in health and nursing research – building the way to walk. *Texto Contexto Enferm, 26*(4), 1–8, e2290017. http://dx.doi.org/10.1590/0104-07072017002290017

Denshire, S. (2014). On auto-ethnography. *Current Sociology Review, 62*(6) 831–850.

Dewey, J. (1944). *Democracy and education.* Free Press. (Original work published 1916).

Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia,* trans. Brian Maasumi. University of Minnesota Press.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2005). *The SAGE handbook of qualitative research* (3rd ed.). Sage.

Denzin, N. K., & Lincoln, Y. S. (2011). The future of qualitative research. In Denzin, N. K., & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 681–84). Sage.

Ellis, C. (2004). *The ethnographic I: A methodological novel about autoethnography.* AltaMira Press.

Ellis C. (2007) Telling secrets, revealing lives: Relational ethics in research with intimate others. *Qualitative Inquiry, 13*(1), 3–29.

Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 12*(1), article 10, http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108

Holman Jones, S. (2005). Autoethnography: Making the personal political. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 763–791). Sage.

Jefferies, R. & Kennedy, N. (2009). *Ngā Mahi: Kaupapa Māori outcomes and indicators kete.* The International Global Change Institute (IGCI), The University of Waikato.

Johns, C. (2020). *Reflexive narrative: Self-inquiry toward self-realization and its performance.* Sage.

Jorgenson, J. (2002). Engineering selves: Negotiating gender and identity in technical work. *Management Communication Quarterly, 15*(3), 350–380.

Lévi-Strauss, C. (1962). *The savage mind.* University of Chicago Press.

Kincheloe, J. (2001). Describing the bricolage: Conceptualizing a new rigor in qualitative research. *Qualitative Inquiry, 7,* 679–92.

Mann, K., Gordon, J., & MacLeod, A. (2009). Reflection and reflective practice in health professions education: A systematic review. *Advances in Health Science Education, 14,* 595–621.

Phillimore, J., Humphris, R., Klass, F,. & Knecht, M. (2016). Bricolage: potential as a conceptual tool for understanding access to welfare in superdiverse neighbourhoods, *IRiS Working Paper Series,* No. 14. Institute for Research into Superdiversity.

Roberts, L. (2018). Spatial Bricolage: The art of poetically making do. *Humanities, 7*(43). https://doi.org/10.3390/h7020043

Rogers, M. (2012). Contextualizing theories and practices of bricolage research. *Qualitative Report, 17,* 7.

Romova, Z., & Andrew, M. (2011). Teaching and assessing academic writing via the portfolio: Benefits for learners of English as an additional language. *Assessing Writing, 16*(2), 112–122. http://www.sciencedirect.com/science/journal/10752935/16/2

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* Basic Books.

Stewart, R. (2001). *Practice vs praxis: Constructing models for practitioner-based research. TEXT, 5*(2). https://www.textjournal.com.au/oct01/stewart.htm

Tolich, M. A. (2010). Critique of current practice: Ten foundational guidelines for autoethnographers', *Qualitative Health Research, 20*(12), 1599–1610.

Waters, R. (1979). Another brick in the wall [Song recorded by Pink Floyd]. *The Wall.* Pink Floyd Music Publishers.

Wibberley, C. (2017) Bricolage research methods. In E. A. Glasper, & C. Rees (Eds.), *Health care research: At a glance* (pp. 106-107). Wiley-Blackwell.

Yardley, A. (2019). Bricolage and bricoleur. In P. Atkinson, S. Delamont, A. Cernat, J. W. Sakshaug & R. A. Williams (Eds.), *Sage research methods.* Sage. http://dx.doi.org/10.4135/9781526421036815632

doi.org/10.34074/scop.6003001

CAPABILITY AND THE PROFESSIONAL PRACTICE MENTOR

James Harrison and Martin Andrew

INTRODUCTION

Learners in professional practice programmes at Otago Polytechnic are required to write "Reviews of Learning," retrospective reflective accounts of the technologies and strategies individuals have acquired in their workplaces and over their work trajectories (that is, careers).

Two mentors in these programmes contributed their own narratives that operate to show how they came to acquire the capabilities they currently demonstrate and share in their capacities of facilitators, mentors, and lifelong learners. We believe that all mentors on such programmes need continually to self-monitor and to reflect on how they came to be the mentors they are today, so contribute these narratives to the broader endeavour of professional practice teaching and learning. Unfurling the whakapapa of how we came to be who we are today is an act of sharing but also of modelling the leadership we hope to foster in our learners. In the spirit of narrative non-fiction, we share two educator stories here. We also contribute to broader conversations on what professional practice is understood to be, and how capability lies at the nexus of practice and research within work-based learning in Aotearoa New Zealand in 2022.

PROFESSIONAL PRACTICE

The issues of what professional practice is and why it is increasingly crucial to forward-looking vocational educational strategies will remain key ones for some years. As work-based learning continues to find its niche within Aotearoa New Zealand's vocational education ecosystem, a focus on the possibilities inherent in professional practice is inevitable. As professional practice gains a solid foothold in postgraduate spaces, including Master's and Doctorate degrees, the issue of who might be qualified to work as an educator and mentor within this space comes to the fore.

Conventionally, as a national and institutional quality mechanism, educators are required to possess at least the degree or qualification they teach. However, beyond the mechanics, there lies a set of traits, or ways of being in a particular context, which come from the educators' own professional practice journeys. Since experiential and transformational learning lie at the heart of professional practice, it is appropriate that the educators themselves utilise the strategy of critical reflection to understand how their own traits evolved over time and through experience. This study crystallises the journeys of two late career professional practitioners as they reflect on the question, "what made me the professional practice educator I am today?"

ACADEMIC REFERENCES

Before unfurling the stories, we wish to point out that the previous paragraph contains no academic references (though clearly Schön, 1983 and Mezirow, 1991, are core). This is because, for many learners embarking on professional practice journeys, the source of their enquiry lies in their own experiences and perceptions as

experts within workplaces and areas of endeavour. The need for further research does not come from reading recent literature within a field and identifying a gap, an under-researched phenomenon, but, rather, from an insider's sense of the need for urgent or valuable enquiry that aligns their own learning journeys with those of their organisation or community and even with perceived needs at local or national levels. Professional practice enquiry emerges more from a hunch about something needing doing than finding a niche that no other researcher in the ecosystem has yet occupied (Andrew, 2015). The impetus for the research is quite different from that in conventional tertiary research. Professional practitioners often bring to their projects a sense of real world knowing through authentic being, a knowing which may not be armed with references in brackets to support the claim.

It is part of the educator-mentor's work to populate the new journey of knowing-more-deeply with the context of current scholarship. The purpose of this is less to identify conventional gaps than to ensure that the practitioner-enquirer's research is grounded in the current thinking and practice currently generated by similar practitioners. The literature search may, then, involve more professionally-oriented discourse, such as reports and policies, than peer-reviewed academic articles. Any such articles in books, conference proceedings and journals are, of course, important to the search; but so too are texts and artefacts from the field, including non-peer-reviewed state-of-the-art or reflective pieces in newsletters, periodicals or journals of professional organisations. These are artefacts of practice, not of academe, but they bring with them a sense of lived-in rigour rather than densely researched rigour. It is the rigour of life, not of the ivory tower.

MY JOURNEY: PROFESSIONAL PRACTICE MENTOR 1

As I look over the introduction above, part of me wants to spit. The lack of references to existing studies to support the claims deeply offends that part of me that came from and has had various feet in the ivory tower just mentioned. This reflection comes from knowing the impacts and traumas that stages in my life journey have exerted and holding them under the microscope to seek fresh meaning. For four years, to adopt the metaphor of Gee (1991) and Lave and Wenger (1991), I was 'apprentice' to a 'discourse'; the discourse of conventional academic doctoral-level textuality. In plain English, I was a doctoral student in Humanities and Social Sciences within a non-professional practice discipline. As I look back, I realise that the techniques and processes of being scholarly are still with me today, although the subject matter of the work itself may lack immediate relevance to my current journey. The topic was a vehicle for becoming and being scholarly, and I retain the mantle of the scholar today. What this means is that I am able to bring to the professional practice learners' journey that ability to contextualise, rationalise and foreground the enquiry of the learner. By 'foreground,' a term I acquired in a post-structuralist rabbit hole, I mean to gain an understanding of the environment within which the enquiry is to be understood, and the historical, economic, cultural and political factors that belong to that environment. The ability to describe and analyse the context and background of a professional practice enquiry is a key trait of the mentor in this area.

I often wonder where my natural curiosity comes from, and why I am naturally curious about others' journeys and enquiries also. I find myself easily hooked into the flow of others' enquiries before you can say "Csikszentmihalyi" (Csikszentmihalyi, 1997). These are also the flows of the learning journeys of learners. I know that this is partly in the blood, as it were, as my earliest memories of myself are as a novice naturalist, scrapbooker and writer. I would collect flowers of the field, press them, display them, and create a narrative around them that was both naturalist and naturalistic. By 'naturalist' I mean that, as a child, I wanted to be David Attenborough. By 'naturalistic,' I mean understanding the whakapapa and very being of an object by deep and close research using whatever research materials I, as an apprentice bricoleur, could uncover and discover. I came to understand those objects, those pressed flowers, as artefacts of research, with a history, a present purpose, and an essential role in the ecosystem. I now realise a crucial trait of the mentor: terminal curiosity.

As a scrapbooker in the days before computers, and even before we had a television, I gathered together junior bricolages of clippings on any phenomenon that interested me (in the manner of Rogers, 2012). I wrote about the life stories of famous people, especially those recently deceased; about films I had seen and their actors and creators; about species of the world – particularly birds – that inspired my imagination. I also collected ephemera on places that fascinated me: postcards from Istanbul; cigarette cards on ancient Egypt; photographs from early Aotearoa New Zealand, particularly those featuring Māori faces. I would always construct narratives – ways of making sense of the eclectic collections of objects and artefacts – to accompany my scrapbooking. It was not merely an exercise in being a magpie, but in making sense of the world. Without realising it, I had the beginnings of a phenomenologist. Human consciousness and experience and their intentionality in generating lived experience remain a key grounding for my work as a mentor. I exemplified Brunerian identity-led discovery learning (Bruner, 1961). I knew even as a child that I could generate and co-create artefacts representing knowledge via varying combinations of perception, imagination, thought, emotion, desire, volition, and action. The mentor facilitates others' capabilities to generate such artefacts of their own.

Writing was, and still is, central to how I enact my professional practice. Today I start my day, as a kind of karakia, with a piece of reflective writing that clears away the clutters of dreams and worries and creates a clear space for thinking about the day ahead. The act of reflective writing positions me in readiness for the flow of work, mentoring included, lying ahead. As a child, I wrote plentifully and received headmaster's awards for everything I wrote, so I only wrote more; until I realised I was monopolising the awards space. The cultural capital of the headmaster's award partly motivated me, but the desire to write welled from deeper inside. In short, writing was both therapy and method (Richardson, 1990). Today I regard Laurel Richardson and Elizabeth St Pierre's concept of writing as a method as central to creative and reflective critical writing in professional practice (Richardson & St Pierre, 2005). Following Richardson (1990), writing was part of my habitus, the meeting place of my socially ingrained and hence habitual skills and ways of being in the world and my natural disposition. I realised young that power could be created culturally and symbolically and that I thought and behaved in a particular way because of the goals of cultural and to a lesser extent social capital. In short, I was a baby Bourdieu (Bourdieu, 1986). Today I understand the current practices of my learners as resulting from both socially ingrained processes and from an unconscious and ever-changing but guiding propensity to action.

Professional practice research examines an individual's learning accessed, usually but never necessarily, as writing, via a process of reflecting on action (Schön, 1983), particularly on what Tripp (1993) called 'critical incidents'; moments of reflective sense-making that spurred or inspired learning in the professional practice contexts and communities both Gee (1991) and Lave and Wenger (1991) anatomised. However, as the paragraphs above demonstrate, it is also important to realise where one's propensities, talents, inclinations, orientations and desires for action come from in the fabric of lived experience. In an analogous way, in the Te Ao Māori method of whakapapa kōrero, the telling of one's origin story in relation to one's tīpuna or ancestors is crucial to understanding the individual today. Surely how we learn at work, together with the strategies and techniques we develop over time to cope and to grow, stems from better understanding formatives stage of living. It seems to me that we can only participate in transformative learning if we first understand the formative learnings that led to the individual we are today. This is why the idea of coping with disequilibrium, so central to John Dewey's theory of education, applies to professional practice contexts. How we learn in encountering difference, strangeness, conflict and otherness within workplace contexts as adults connects surely to our developmental being (Dewey, 1944).

An assessment known as the 'Review of Learning' is fundamental to professional practice in such programmes as those belonging to the College of Work Based Learning at Otago Polytechnic. This assessment is a self-reckoning of the work-based learnings individuals report they have acquired on their work journeys, which as in my case here, are not separable from the autoethnography of the broader current self, always in flux, as is the case with lifelong long learners and reflective practitioners. This draws heavily on identity theories, particularly Polkinghorne's (1991) argument for the non-separability of narrative and self-concept. Assessments

of this nature ground the work of professional practice in a cultural archaeology of identity; a sense of where the learner-researcher today emerged, and why they are ready to embark on a future enquiry. The exercise is one in envisaging a frame of practice that is an embodiment of the strategies and techniques acquired via practice-led, work-based critical moment analysis and autoethnographic enquiry. This species of enquiry takes the story of the individual, the autobiography, and validates it as knowledge by making contributions to broader learning cultures, including the workplace and allied organisations, and the area of endeavour to which the project belongs. This identity exercise is the springboard to a research proposal, known in this framework and context as a Learning Agreement.

What we used to safely call a 'career' as a planned life trajectory in the shape of a ladder in work contexts turned out to be a series of serendipities, self-disruptions, risk-takings and grabbed half-visible opportunities. There is no upward staircase, because there are also snakes in this game of life, and you go down snakes. There is no career for life – unless you are a dentist – but there is a DNA-shaped but unruly squiggly line that we write as we go along. If you wanted to grow up and be a something-or-other, you may grow up and find there is no market for your dream; indeed, that role might no longer exist in the society you inherit.

This is another reason why professional practice is important: it helps us to deconstruct the capitalist idea of an ambition-based career and turn it into a sequence of lived opportunities where one learns from one's mistakes and empty hopes as much as from one's triumphs and coups. It is critical in the sense that Freire (1998) and hooks (2003) are, casting education as an engine for community and hope. A learner who trains to be a dentist, a targeted form of training allied with professional practice, in a tertiary learning context, may forever be a dentist and secure in a lifetime career culminating in an owned practice. But what happens if you tire of cavities and halitosis and the next time someone opens their mouth you want to scream? The ontological turn is a truth which is part of everyone's lived experience of the world of work. Professional practice is about future-proofing lifelong learners by making them aware of the techniques and strategies they develop during their careers to cope with ontological turns and improve life. It enables individuals, however secure in their current position, to encounter unknown futures and to cushion the inevitability of change with resilience and trust in one's own capabilities. The world of career ladders is, in the 2020s, a game of snakes and ladders.

The world I graduated into was not the world of the aspirations I had when my higher education started. I imagine I am not unique in seeing what I had imagined as a future recede into redundancy and impossibility. Today's ambition is tomorrow's broken dream. Learning for an unknown future (Barnett, 2004), I learned from experience, is the necessary way of education in the neo-liberalised world, and this means a focus on capabilities *not* disciplines. The mother of all budgets, the Great Financial Crisis, the COVID-19 pandemic and 2020, "the year that destroyed the career ladder" (Preskey, 2020) consolidated this worldview, a worldview that marks the 'educator-as-professional practitioner.' However, I operated in seven dual-sector higher education contexts, generally emerging into leadership roles, over a 30-year period, in both Asia and Australasia. Whenever I felt I was falling asleep on my feet or whenever I sensed the workplace was another sinking ship, I reinvented myself. By far the most important trait, or set of traits, I acquired was the capability for independence, autonomy and agency, and I would argue that today any Master or Doctoral journey is integrated towards researcher autonomy and, preferably, also agency (Bitzer & van den Burgh, 2014). Agency, the power to act, is well complemented by autonomy, the capability to do so independently, to self-govern (Toohey & Norton, 2003). I realised that the goal of the true educator was not to make oneself indispensable to learners but to make oneself redundant. The moment the teacher is no longer needed, other than as a legacy or memory, then their work is done. The fledged bird can fly on their own wings.

The career journey built an integrated but eclectic individual with recognised capabilities in team management and professional development, curriculum design and management, research mapping and execution, pedagogical and heutagogical communication, and the ability to use ten long words in one single sentence in oral and written discourse. The capability of making the complex, even the wicked, seem palatable and practicable to others is

a key tenet of the mentor. The ten long words may be necessary as the journey wends and winds, but simply listening to the learner and their needs is a trait for building trust with individuals and in communities. To listen – this is the foremost propensity of the mentor.

PROFESSIONAL PRACTICE MENTOR 2: A PERSONAL DEVELOPMENT JOURNEY

Formative stages

My initial concept of learning only became apparent to me from about my teenage years. The reasons for this was that I was not associating my learning with my everyday practice or results. The awareness started when I was in my early stages of grammar education in the United Kingdom (UK). The reason it became apparent to me then was because my academic exam results became significant to me. Due to my early life in New Zealand, I was some months behind my British counterparts when I returned there at the age of 10. As a result, I was not initially successful in obtaining an academic grammar place in secondary education. After completing a successful year in a more vocationally focused school, I was offered the opportunity of transferring to a grammar school education. Due to the challenge this new opportunity provided, I worked very hard at my homework and revision study to justify my place there. To my surprise I came top of the class at the end of the first term, and this provided me with the motivation to remain there as long as I could. Looking back at this now, I realise that I had obtained a significant foundation of general knowledge from my extensive reading at my primary stage together with an exceptionally good memory. However, the place for learning was firmly in the recall and utility of event, place, time measurement and meaning provided by an academic framework rather than comprehension of life, nature and mysteries.

I also recognise that I was a curious person; and I was interested in many different areas both academic and practical. Whilst practical hobbies in bicycle mechanics and radio construction were there, I was not aware of their wider significance at this stage other than that my success in them was due to my careful assembly and disassembly practice. This was because my focus on my main rewards and recognition by others was coming from my academic education. Fast forward a few years to my secondary qualifications and I was starting to find that my study in more complicated subjects like physics and maths was no longer providing me with the same results as earlier. At the same time, no one could provide any answer as to what I would do if I did not achieve the necessary grades for university entrance. I could not afford to fall behind again.

I therefore decided to apply for a technical apprenticeship with a large electronics company, Marconi, on the other side of the country. In the first couple of years, I did sufficiently well at my academic and practical studies at a technician level that I was then offered a transfer to a professional technical apprenticeship that included a sandwich degree in Applied Physics. This new challenge proved tough because my expectations of my fluency were not matched by my academic practice. Just remembering things at this level was not good enough and despite significant practical experience within research and development laboratories, my self-confidence as a graduate engineer felt insufficient to me. My reflection on this today was that my level of technological capability linking theory with practice was not as I expected it to be. I will come back to this topic later as it was a significant emotional roadblock for me and reduced my self-confidence.

Thus, I remained as a junior development engineer for less than a couple of years before I changed careers. I had realised that I had an interest in human development and was able to gain a position as a training officer in a Marconi systems company responsible for apprentices of the kind that I had been. I succeeded well as within half a dozen years I led the human resource development department with 20 staff and 500 apprentices within a company of 2500 staff. However, I still felt that this success was less about me than simply being in the right place at the right time and therefore I started searching for a new challenge.

This took me a while before I was successful in obtaining a project manager role with the Manpower Services Commission (MSC), a quango funded by the UK government to develop national training initiatives. This was where I felt my professional career really took off. I was given the responsibility of establishing about 10 projects, with a total budget of around £5 million, in technical fields to develop open learning materials and support for the mid-career technical development of professionals who could not study away from work. The relationships I developed with colleagues and with project participants at the cutting edge of a new field of educational technology created a passion and rewards that I had not met in any career beforehand. Within a couple of years, I was promoted to a higher grade where I was made responsible for developing a new national programme of vocational qualifications based on standards of performance. Again, I led a team of around 20 staff to work with around 20 industry and business sectors within the UK. We established a reference group from the industry sector, who were supported by consultants, to develop role standards for the main work roles that existed. The most significant of these was the establishment of the Training and Development Lead body where I created the usual standards group but also formed a qualification group of employers and major awarding bodies to develop related qualifications. This group of employers in industry and business were critical to the successful adoption and management of this new system.

At the same time, I was also successful in undertaking a distance-learning Master of Business Administration with Warwick University. This time, I was not so worried about the academic outcome for three reasons. Firstly, I was confident in my practice and performance unlike earlier; secondly I could see ways to immediately apply my new learning within my work responsibilities; and thirdly I was now confident I could integrate my academic and work experience within in my professional practice. At this point in my career, I became fully aware of my professional competence which combined theory and practice as well as having the emotional confidence from prior work success to succeed in all that I did. I now realised that not only was I technically competent, I was also a good manager and leader of people. I was undertaking initiatives that had national significance and I was able to inspire others to engage with a vision I had created. This encouraged me to move onto my next career in management and strategic education consultancy. Initially, I worked with one consultancy supporting work of the kind I had previously done in MSC, but later the work led me back to New Zealand, firstly for work related to performance management in large strategic companies like New Zealand Telecom and Watercare, and then with industry training organisations who were developing similar vocational qualifications for their sectors. In the case of the latter, I spent around four years creating vocational qualifications for the electronic industry sector ranging from shop floor levels through to professional role levels. This involved organising industry-wide consultation, synthesising the results in fully developed standards of practice, and then producing an appropriate qualification framework. Subsequently, this led to more work with an industry entrepreneur who was seeking to develop computer-based learning for the primary and secondary school sectors.

It was here that I became fully conscious of my own practice and how I achieved the results I produced. This included my ability to engage and involve other people and the frequent use of my creativity and problem-solving capability. I could also see how to use my talents in different fields and disciplines. My subsequent career in tertiary education and the completion of my PhD became a natural extension from this position.

The present day

My sense today is that I am able to use all of my conscious and unconscious faculties to deliver excellent and significant results to my students, my clients and any organisations I am associated with. My current identity is an integration of my practice (both knowledge and skills combined) together with significant creative interpersonal and communication skills to produce successful outcomes which is underpinned by my emotional confidence and motivation. This is achieved through a combination of an ability to see a big picture and to work through coherent processes to deliver that picture. My PhD results (Harrison, 2021) identified a framework of developmental practice which I see as central in all future education developmental processes. The reason why is because the rate of change of development in society is such today that we must provide every person with the capability

to continually develop throughout a lifetime of careers. Of equal significance in a person's development is the emotional context in which they find themselves, and that learning occurs and flourishes when people feel valued, confident and motivated by whatever it is that they are doing and which provides intrinsic value for them for all their lives. During my PhD studies, my realisation of an integrated, holistic, development framework was achieved by my ability to link together all of my career experiences, successes, challenges and emotional rewards and to see them creating breakthroughs within the facilitation support I was providing to my adult students.

I find 'identity' a good description of the totality of individual knowledge, skills and behaviours that we use in our professional practice. Moreover, it is not only the objects and perceptions of which we are conscious, but also the unconscious, intuitive, creative and emotional dimensions that we have developed throughout our lives that shape our trajectory of practice going forwards (Polkinghorne, 1991). There are arguments for and against the separation of tacit and propositional knowledge (Luntley, 2011) but tacit knowledge makes use of cyclical and iterative process cycles through time and develops expertise in an analogous way to product and service quality practices.

I am also of the view that professional practice should not need to play a Cinderella role to academic research practice and results. Much of our modern world comprehension has been gained though empirical observation and practice which leads to theoretical advancement post discovery and practical utilisation. In a world of wicked problems, there are no longer single definitive answers to any issue and it is the diversity of individual experience that provides the creative metaphors or analogies that can lead to significant breakthroughs in any field.

Reflecting on my journey

So how has this extensive journey of five careers and more than 50 years of diverse work experience provided me with the capability to be the professional mentor and facilitator I am today?

Firstly, my range of different careers has provided me with the pentimento of leadership, consultancy and professional practice to be a transdisciplinary practitioner (Padmanabhan, 2017). Secondly, the unifying framework of vocational and professional development I have identified from my PhD has shown me that the same underlying processes of practice and development are common to most fields of practice, and that the way in which I can support my students is to help them realise and build on a similar foundation for themselves. Thirdly, I use my curiosity and passion and successes from my own development to encourage others to pursue and fulfil their dreams too. I have also reached a stage in my life and career success where I am now comfortable with who I am and how I operate in the world, and this provides emotional confidence to my students who are still seeking that in their lives.

There are a few other dimensions which I feel support my role as a professional development mentor.

I am very aware of the Johari Window perception model (Luft & Ingham, 1955) and the area defined by "not knowing and not being aware of not knowing" and how this is continuously increasing. Secondly, I am also aware of the exponential rate of change occurring in our modern world and how paradigms that have been held dear for many years are no longer supported and being replaced in many fields and disciplines. As a result of my present success and confidence with recognising what remains stable in terms of practice processes, I am able to help develop confidence in others who have not understood these changes. Since I have borne witness to many fields of knowledge becoming redundant, I am also open to the new and am willing to learn from my students' understanding of their lives and perspective in the reciprocal, two-way spirit of Ako. I try to encourage as many staircasing conversations as possible to stimulate others' awareness and practice (Harrison & Mendoza, 2019). We are fortunate that the practices and processes of our learner centred provision enable us to provide an Oxford type of tutorial system with strong emphasis on individual guided development to build independence in learning and practice (Beck, 2007).

The importance of this to my colleagues and I working in this space is that it is helping others to build their confidence and independence for themselves and it will help them build and support others to find their pathways in life too.

TOWARD CONCLUSIONS

The study's contribution

This study served several purposes. Firstly, it demonstrated that professional practice pivots on identity evolved over time and place. The identity of the learner-researcher is accessed, retold, and critically scrutinised as autoethnographical enquiry. The creation of the professional practice genre, "Review of Learning," or a document of coming-to-awareness such as that written here, brings to consciousness the motivations and inspirations that make us the researcher-enquirer we are today. Such an exercise of coming-to-know the capabilities of the self is both empowering and revealing, and potentially transformative. It enables the techniques and strategies acquired in workplaces over time to be put on the slab and analysed. It privileges discovery knowing in the field over that species of knowing exemplified and reified by academic references.

Secondly, this study has indicated, in its emphasis on the mentors coming-to-know, some of the key traits of mentors in professional practice domains. To be a reflective listener is fundamental in the early stages of a candidature, and to build autonomy and agency are the longer term capabilities, at the far end of the research tunnel. Curiosity is crucial, as is the desire to be creative, generative, and enquiring, whether via writing or other modes and methods of enquiry and representation. To be aware of the theories and scholars that have been impactful in one's educational journey helps us to know the core of our educative being: the ideas that stick about the heart as opposed to those that fall away. The mechanical aspects, the knowable objects, results and impacts of scholarship, are easily learned, but familiarity with them comes with the experience of the researcher. To be aware that much changes in the postmodern world, and that what one sets out to achieve may not be what one ends up achieving, is a vital trait: coping resilience with swift change. The facilitation of capability – bringing to the fore the tacit aspects of an individual's knowing through reflective and critical conversations – is a rewarding two-way process.

James Harrison has enjoyed an extensive set of careers in industry, the civil service, and Higher Education both in New Zealand and the United Kingdom. This has included responsibility for the professional development of several hundred scientists, engineers and business professionals within a capital electronics company of GEC Marconi, being one of four civil servants leading the UK vocational qualification changes in the late twentieth century, deriving qualifications for the New Zealand electronic industry, and delivering senior academic roles in the New Zealand tertiary sector. He has supported many mature domestic and international students undertaking bachelor and master's work-based learning qualifications at Capable NZ. In 2021, he completed his PhD researching capability at Victoria University, Melbourne.

Martin Andrew operates as a creative mentor in postgraduate programmes, including Master and Doctorate degrees in Professional Practice. Prior to his four to five years supporting the College of Work Based Learning in Otago, New Zealand, he had sojourned away from his hometown of Ōtepoti/Dunedin with two honorary posts at Melbourne universities in Creative Industries and Transnational Education (TNE). His work and research have become increasingly focussed on doctorate education and supporting learners to reach their own personal best through critically reflective practice and writing. A transdisciplinarian, he emphasises that his past disciplines have included Education, Drama, Linguistics and Writing, Creative and otherwise. He holds honorary professorial positions in Australia, Vietnam and Indonesia.

https://orcid.org/0000-0002-0108-5195

REFERENCES

Andrew, M. (2015). Mind the research gaps: drawing on the self in autoethnographic writing. *TEXT* Special Edition. *Papers – The Refereed Proceedings of the 18th Conference of The Australasian Association of Writing Programs, 2014.*

Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development, 23*(3), 247–260.

Beck, R. J. (2007, 31 March). *Towards a pedagogy of the Oxford Tutorial* [Paper presentation]. Conference on the Oxford tutorial, Lawrence University, Appleton, WI. http://www2.lawrence.edu/fast/beckr/pdfs/OxfordTutorial_7_05_06.pdf

Bitzer, E., & van den Burgh, S. (2014). Doctoral identity change towards researcher autonomy during research journeys across disciplines. *South African Journal of Higher Education, 28*(3), 1047–1068.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of capital* (pp. 241–258). Greenwood Press.

Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review, 31,* 21–32.

Csikszentmihalyi, M. (1997). *Creativity: Flow and the psychology of discovery and invention.* Harper.

Dewey, J. (1944). *Democracy and education.* Free Press. (Original work published 1916).

Freire, P. (1998). *Pedagogy of hope.* Continuum.

Gee, J. P. (1996). *Sociolinguistics and literacies: Ideology in discourse* (3rd edition). Falmer Press.

Harrison, J. G. (2021). *A developmental framework of practice for vocational and professional roles* [Unpublished doctoral dissertation] Victoria University. https://vuir.vu.edu.au/42717/

Harrison, J. & Mendoza, P. (2019). The value of professional conversation as illustrated by a discussion on professional development. *Scope: Contemporary Research Topics (Flexible Learning), 5*, 69–79.

hooks, b. (2003). *Teaching community: A pedagogy of hope.* Routledge.

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

Luft, J. & Ingham, H. (1955). The Johari window, a graphic model of interpersonal awareness. *Proceedings of the Western Training Laboratory in Group Development.* University of California.

Luntley, M. (2011). *Expertise – initiation into learning, not knowing.* In L. Bondi (Ed.), *Towards professional wisdom: Practical deliberation in the people professions* (pp. 27–44). Ashgate.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* Jossey Bass.

Padmanabhan, M. (2017). *Transdisciplinary research and sustainability.* Routledge.

Polkinghorne, D. E. (1991). Narrative and self-concept. *Journal of Narrative and Life History, 1*(2–3), 135–153.

Preskey, N. (2020, November 5). *2020: The year that destroyed the career ladder?* Refinery 29. https://www.refinery29.com/en-gb/2020/11/10113781/best-jobs-2020-uk-career-advice

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* Basic Books.

Richardson, L. (1990). *Writing strategies: Researching diverse audiences.* Sage.

Richardson, L., & St. Pierre, E. A. (2005). Writing a method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 959–978). Sage.

Rogers, M. (2012). Contextualizing theories and practices of bricolage research. *Qualitative Report, 17*, 7.

Toohey, K., & Norton, B. (2003). Learner autonomy as agency in sociocultural settings. In D. Palfreyman & R. C. Smith (Eds.), *Learner autonomy across cultures*. Palgrave Macmillan. https://doi.org/10.1057/9780230504684_4

Tripp, D. (1993). *Critical incidents in teaching: Developing professional judgment.* Routledge.

Article

doi.org/10.34074/scop.6003003

ENGAGEMENT AND IMPACT OF GREEN OFFICE TOITŪ

Christiaan Bredenkamp, Shehan Anjana, Dani Mao and Marianne Cherrington

INTRODUCTION

As experts in organisational transformation, performance, operations and governance, business schools are duty-bound to do more to address the climate crisis (Galdón, 2022). The Green Office Movement is an international sustainability platform for stakeholders in higher education, and a catalyst for organising sustainability initiatives. Green Office Toitū (GOT) was launched in December 2021 at Otago Polytechnic Auckland International Campus (OPAIC) to address the need to improve operational sustainability efforts. Green Office Toitū now functions as the primary platform for student-led sustainability projects initiated by OPAIC. Green Office Toitū also serves as an internship opportunity for OPAIC students, providing a professional, experiential work environment for students. Getting students to engage and participate in GOT activities is vital to justify its inception and expansion, to create a 'culture of sustainability' on campus.

Green Office Toitū is 'working around' obstacles and improving long-term sustainability, using strategies that enhance engagement and participation in GOT projects. Creating enabling contexts within our OPAIC culture enhances student-led exploration in work-based learning internships. In particular, two primary GOT initiatives were observed and analysed to understand better the current state of overall engagement. The GOT initiatives included a FutureFit competition as well as Conservation Volunteering Day. Interviews were conducted with nine students from OPAIC to attain a more detailed understanding of students' experience with, and understanding of, GOT. Social media metrics of GOT posts were analysed to determine current levels of online engagement. Green Office Toitū members met regularly with OPAIC staff and academic supervisors to reflect on GOT's effectiveness in its inaugural term of operation; issues and areas for improvement were unpacked to discover how best to increase GOT engagement on campus. A new realm of experiential professional practice resulted on campus, activating enquiry, applied research and scholarship. Recommendations have been provided to address highlighted challenges and to stimulate novel internal and external stakeholder engagement.

Green Office Toitū functions as a catalyst for student-initiated sustainability projects at OPAIC. The office is responsible for managing, informing, and promoting sustainability initiatives on campus and within the local community, providing work-based learning for OPAIC's undergraduate applied management students. Green Office Toitū is a member of the international Green Office Movement that originated at Maastricht University in the Netherlands in 2010 as part of a collaboration with UNESCO (Green Office Movement, 2018). This movement is quickly spreading across the world to other tertiary institutions. The purpose of the Green Office platform is to consolidate internal sustainability efforts and partner with both internal and external stakeholders to promote sustainable practices.

The name *Toitū* was gifted to the Green Office instituted at OPAIC. *Toitū* is a Māori word that loosely translates to 'enduring, untouched, kept pure and protected.' Otago Polytechnic Auckland International Campus is the first tertiary education provider in Aotearoa New Zealand to join the Green Office Movement.

PROJECT CONTEXT AND OVERVIEW

Climate change is an existential threat as well as an opportunity that can no longer be ignored. Many organisations take on the challenge of climate change via small independent projects, with little to no success. To face climate change head-on, organisations must think bigger, work smarter and consolidate their efforts. For tertiary learning institutions, consolidating diverse projects under a single dedicated sustainability office can maximise both the effectiveness of resource utilisation and the deliverable results. The primary challenge faced by organisations striving to operate a successful sustainability office is to maintain engagement and participation of both internal and external organisational stakeholders.

Recently, OPAIC students, staff and leadership have been promoting sustainability initiatives. Research forums, waste management processes, efficient energy consumption practices, sustainability-focused assessments, and staff publications on sustainability are just a few examples of strategies utilised by internal stakeholders at OPAIC. These strategies were great in principle but encountered pragmatic challenges. From formal and informal reviews of metrics, feedback and observation, a number of obstacles were documented including: low internal stakeholder buy-in, support and engagement; high student turnover; awareness issues; and insufficient internal coordination and collaboration mechanisms for sustainability initiatives. These issues were exacerbated by COVID-19 constraints.

Green Office Toitū was established as a means of overcoming these challenges via a collaborative platform for OPAIC students, staff, and leadership in support of sustainable projects. The office initiates various projects at OPAIC and within the community to promote sustainable practices. As part of the inception process, GOT members quickly realised the importance of having high levels of student engagement and participation as vital to the success of all GOT initiated projects. Continued engagement helps maintain the overall momentum of the sustainability platform.

The activities and events initiated by GOT each term are driven primarily by students, within Internship Projects, as part of their undergraduate applied management qualification; the office is supported by staff and an academic supervisor. The primary objective of these intern students is to promote work-based learning in sustainability both within their campus and beyond. A key focus of the GOT interns is to get other students to support their initiatives. Participation in most of these initiatives is non-compulsory and voluntary for campus students, necessitating an effective strategy from the GOT team to maintain student engagement and participation in their projects.

Green Office Toitū has many different functions such as marketing, financial management, recruitment, coordination, and social media management. All of these functions are managed by the recruited intern students with OPAIC staff support. From the intern students' perspective, it is important that GOT uses effective strategies to improve student engagement. This is a win-win for both the interns' research projects and for the office in creating buy-in and activating our Strategic Objectives for Sustainable Practice at OPAIC (Otago Polytechnic, 2013).

Overall, this article aims to identify key strategies that can improve student engagement and participation in the projects organised by GOT. Objectives include:

- Determining key factors that help attract more students to the projects of GOT.
- Examining how GOT can utilise its social media platforms to increase student engagement and participation.
- Investigating effective communication channels to engage campus students in GOT.
- Determining factors as potential barriers to student engagement and participation.
- Providing recommendations for increasing student awareness, engagement, and participation. These recommendations should also provide a means to overcome the barriers faced in the pursuit of improved student buy-in.

THE IMPORTANCE OF SUSTAINABILITY IN EDUCATION

Sustainable development is meant to ensure that we meet our own needs while making sure future generations are also able to meet theirs. These initiatives are not only about preserving environmental resources but also consider social and economic resources (Office of Sustainability, n.d.).

The tertiary education sector has a vital role in sustainability as they are a key stakeholder responsible for creating future leaders. It is imperative that the tertiary education sector aligns with the United Nations Sustainable Development Goals (SDGs) to create a sustainable future (Žalėnienė & Pereira, 2021).

A campus can activate impactful sustainability operational policies such as going paperless. According to industry experts, approximately 24 trees are cut down to make one metric tonne of printing paper. Processes need to adjust for a campus to go paperless, but institutions can easily utilise multiple strategies to reduce paper consumption and encourage partners to follow suit. The initiative aligns strongly to SDG number 12, Responsible Consumption and Production.

Waste reduction is a key focus, as Aotearoa New Zealand is predicted to generate 17.49 million tonnes of waste per year, with an estimated 12.59 million tonnes going to landfills. More than 7.5 million tonnes of New Zealand's waste is considered potentially hazardous (Ministry for the Environment, 2021); many old landfill dumps are at major risk of coastal erosion and flooding, worsened by climate change (Macdonald, 2021). Reducing landfill waste supports SDG number 6, Clean Water and Sanitation, as well as SDG number 11, Sustainable Cities and Communities.

Tertiary education institutions have key responsibilities in managing their consumption and their waste. It makes good environmental and financial sense, as well as building towards a circular economy.

ENGAGEMENT AND EMBEDDING SUSTAINABILITY IN WORK-BASED LEARNING

Green Office Toitū was instigated to support student sustainability projects on campus. The launch was in the midst of a three-term campus shutdown due to COVID-19 Delta and Omicron surges in Auckland. The lockdowns hampered delivery of OPAIC internship and industry project programmes; GOT was a means of supporting students. It helped them to re-engage and find meaning through work-based learning and it lifted their capabilities and sense of achievement.

Student engagement is a metric of a student's level of social involvement as well as the quantity and quality of effort put forth in activities that induce a sense of accomplishment (Hughes, 2021). Student engagement is not just participation; it consists of genuine involvement with a purpose to compete or achieve. It requires a quality effort, used to further an initiative. Strong interaction and intentionality are also key elements of engagement (Hughes, 2021).

The purpose of GOT is to increase student engagement, while building students' skills and capabilities in immediate, real world contexts. Around three per cent of individuals in the world attend university, yet an average of 80 per cent of policymakers have a higher education degree (Students Organizing for Sustainability International, 2021). This shows the important part institutions play in moulding our future leaders. Most tertiary providers do not adequately ensure graduates have knowledge and skills needed to lead in a sustainable world, and tertiary providers are especially lacking sustainability governance as well as a 'culture of sustainability' (Salvioni et al., 2017).

Tertiary education providers use student engagement metrics to measure overall success, so it is vital to maintain a level of high student engagement to remain competitive in the tertiary education sector. Student awareness

and focus on issues relating to sustainability matters have intensified in recent years (Students Organizing for Sustainability International, 2021). Students Organising for Sustainability International reported in a global survey that:

- 92 per cent of the student participants have agreed that sustainable development is crucial
- 92 per cent state that all schools and universities should actively be promoting sustainability
- 90 per cent are concerned about climate change effects and addressing climate change
- 90 per cent are willing to work on a lower salary in social and environmental organisations.

Overall, the study concludes that there is a significant improvement in student engagement regarding sustainable activities amongst tertiary education students when compared with previous years (Students Organizing for Sustainability International, 2021). Student engagement involves actions, programmes, and projects that allow students to contribute to society and to adopt SDGs (Jain & Jain, 2019).

Getting students to participate in extracurricular activities that focus on sustainability is a great way to generate momentum for the moment and passion for the environment. Tertiary institutions education should follow a strong student participation approach to contribute to sustainability as well as to uplift the skills and knowledge of students (Wu, 2015).

Improving student participation in an institution's sustainability efforts is essential for success as they are often non-compulsory and voluntary. Initially, the institution should focus on shaping its cultural environment to increase participation in their sustainable events. That means they should provide an effective and safe environment for students to get involved in their projects. Moreover, the projects should provide a beneficial outcome for the students as well as the environment.

RESEARCH METHODOLOGY

The research methodology used includes both qualitative and quantitative data collected through primary and secondary collection methods. Primary data was collected through observations and interviews. Both previous and ongoing GOT projects were observed. Online interviews were also conducted with OPAIC students from three departments, namely applied management, construction, and IT. The interviews were conducted using the Microsoft Teams platform. The interview feedback was used to analyse the effectiveness of strategies that the Green Office used to improve student engagement. Secondary sources such as social media statistics, academic publications and online platforms were also used to collect data and analyse the engagement and participation of students.

This particular research involves unstructured observation. The observations were conducted openly and there were no pre-justified variables. Observations primarily focused on GOT's projects conducted during OPAIC's first study block of 2021. Another area of focus for observations were strategies GOT used to improve student engagement in their projects.

Data collection

The researcher selected nine students to conduct interviews from three departments at OPAIC, namely applied management, IT, and construction. This helped broaden the collection sample and it provided a greater variety of student experiences. Participants were mainly approached and recruited through the Teams platform. They were each asked a set of questions regarding student engagement of GOT during the interview. Green Office Toitū's social media statistics were used as an internal source of secondary data. This was supplemented by additional internet research.

Ethical considerations

Names and other personal information were not used during the research activities and the participants remain anonymous. The project did not publish any identifiable personal information. Personal data had been deconstructed to help inform the project's conclusion. All raw data on which the results of the project depend will be retained in secure storage for seven years after which it will be destroyed.

Potentially sensitive information was maintained confidentially. All data has been stored in a safe place and protected using passwords. All participants have been identified as anonymous throughout the article. The ethics board that approved the project did not identify any potential physical, and emotional risks associated with the research methodology. The research conducted does not target any specific vulnerable group of people. All participants of the projects were over the age of 18 years.

INITIATIVES AND THEIR MEASURED EFFECTIVENESS

Data was collected and analysed from three GOT initiatives, including the FutureFit competition, the Conservation Volunteering Day and Social Media Outreach. This data can then be analysed to determine the effectiveness of the GOT's initiatives and the strategies they used to drive student engagement in their projects. Recommendations can be extrapolated from the results of the analysed data and presented to GOT to improve their efforts to better involve OPAIC students and staff in sustainability initiatives.

FutureFit competition

The FutureFit competition started as a collaboration between Wellington City Council and Auckland City Council. As the originator of this competition, Auckland City Council has taken the initiative to promote this competition around New Zealand with the support of GenLess (FutureFit, 2022).

FutureFit is an easy and powerful way for individuals living in New Zealand to reduce overall greenhouse gas emissions. The country's current target is to reduce carbon emission by 30 per cent at the end of 2030 (Ministry of Transport, 2020). With the aim of complying and even exceeding New Zealand's own carbon emission goals, FutureFit has set its own target of 5.3 tCO_2-e by 2025.

FutureFit is a competition that anyone in New Zealand can participate in by answering an online questionnaire about their lifestyle. The FutureFit platform then provides a snapshot of the participant's daily carbon emissions as a rating based on the individual's answers. A set of daily goals and actions are then assigned to the participants. The participants can then complete the actions and update them on their account, with the system then automatically adjusting and updating their carbon emission rating.

Green Office Toitū was in discussions with the Auckland Council regarding the FutureFit competition. The aim was for GOT to introduce the competition to OPAIC staff and students. GOT promoted the competition from 25 February 2022 to attract participants and it launched on 10 March 2022. From their initial discussions with Auckland Council, GOT decided to continue the FutureFit competition every study block and to choose a winner in each block. The goal with this initiative was to continuously promote sustainability to staff and students on campus while also driving engagement and excitement around the subject matter.

Project outcomes

Only 75 per cent of participants joined in the competition compared to the number of competitors GOT expected. Green Office Toitū planned for and predicted to have 16 competitors but only 12 joined the competition during the first study block of 2022 which started on 8 February 2022.

Green Office Toitū's marketing team presented the competition during classes, staff meetings, and other sessions. The team also posted about the competition on GOT's social media pages. More than 90 per cent of the total participants joined after presentations while only 10 per cent joined due to social media posts. A total of 94 people had seen GOT's social media posts about the competition by the end of 22 March 2020.

Twelve individuals ended up joining the competition but only 11 competitors actively participated by completing the actions and goals. It was interesting to observe that all participants used their campus email as the primary means of communication to interact with GOT even though the office had multiple social media accounts. Email was used both to join the competition, as well as seek support in using the FutureFit platform and enquire further about the competition.

By 23 March, the competitors together saved 55.54 kilograms of carbon and earned 27 badges. The GOT FutureFit group was placed 27th in the country for the amount of carbon emissions saved out of 256 teams. Saving any amount of carbon emissions should be considered a win for the environment. It is, however, too early to know how successful this first FutureFit competition was. It would be best to compare the results of this competition to those of the other three planned for the rest of 2022.

Conservation volunteering day

Volunteering Auckland is a non-profitable organisation that provides volunteer opportunities and projects across Auckland. Green Office Toitū collaborated with Volunteering Auckland to organise volunteering events monthly during the study blocks. Green Office Toitū planned to have its first volunteering event on 28 March 2022. The event was planned to be conducted in Selwyn Bush, Kohimarama from 8:30 a.m. to 3:00 p.m. The event involved a set of conservation tasks including weed removal, mulching, litter removal, nursery work, and planting.

Project outcomes

Green Office Toitū created an attractive volunteering day poster for social media to increase participation; the marketing team sent out an email to all students and staff of OPAIC and presented the event during different occasions such as meetings, classes, sustainability forums, and so on.

By the end of March 2022, only half the expected students and staff expressed interest and signed up for the event. All of them expressed interest by replying to an email that the GOT marketing team GOT sent out. Of those who signed up, 60 per cent added the event on their outlook calendar as soon as they expressed interest.

The marketing team of GOT posted about the event on all social media platforms. By 23 March, only 20 people had seen the post on Facebook and 32 people saw the Instagram post. This is less than 10 per cent of the 352 students who studied at OPAIC during Block One of 2022. This is a good start since this was the first study block of GOT's operation, but more work needs to be done to attract students to the group's sustainability initiatives.

Social media statistics

Green Office Toitū created its own Facebook and Instagram profiles to promote its events and provide news updates to students, staff, OPAIC alumni, prospective students, community members, and industrial partners. Other than promoting sustainability initiatives, GOT also planned to use its social media platforms to encourage students and staff to come up with creative sustainability ideas and to celebrate the sustainable achievement of OPAIC. Green Office Toitū's goal was to provide at least two informational content posts weekly along with daily shorts and stories.

Strategy

The social media engagement strategy used by GOT focussed on the following elements: audience, objective, content ideas, posting frequency, analytics and growth. GOT's audience included students, staff members, alumni, prospective students, community members and industry partners. The plan was to share GOT's posts to the Otago Polytechnic Facebook page which had around 38 thousand followers to help increase the online presence of GOT.

The objective of GOT's Facebook page was to increase awareness of sustainability projects occurring on campus. This was to be done by engaging, entertaining and informing their followers about all GOT related activities, events and news. Goodwill and engagement was to be generated by encouraging followers to come up with creative sustainability ideas to implement on campus. Lastly, the page was also meant to celebrate the sustainability achievements of students, staff and industry partners.

The GOT team had to come up with quite a few ideas for content that they could post. The first and most obvious was to post about GOT news, events and activities. Stories and status updates containing daily sustainability tips and facts was a second type of post developed. Lastly, it was to promote local sustainability movements and initiatives run by GOT's industry partners.

Green Office Toitū's interns found that posting on Facebook at least three times a week was the best way to keep their audience engaged. They analysed the number of followers and likes per post to determine overall engagement. The engagement rate was checked every second week to see if their current strategy was working or if changes had to be made.

Facebook and Instagram pages

Analytics was only measured on the first six posts made throughout the first study block at OPAIC. Post 1 was the welcome post of GOT. It was posted on both Facebook and Instagram. This content summarised the purpose of GOT and what it aims to accomplish at OPAIC. The Facebook post had three likes and three shares. The Instagram post on the other hand had eight likes. Even early on, Instagram seemed to be the more popular platform among GOT's audience.

Green Office Toitū's second post was about their FutureFit competition. The content introduced the FutureFit competition and explained how OPAIC students and staff could enrol for it. The post on Facebook had four likes and two comments and one person enrolled for the competition due to the post. The Instagram page had 10 likes which showed that the platform was still in the lead in terms of audience engagement. The third post was a short informative video about the correct way to recycle plastic. On Facebook the post had 13 views and two likes. The Instagram video had 18 views and six likes. At this point, it seemed like the gap between the two platforms was closing.

The fourth post was about the launching the FutureFit competition. The content explained when the competition would start and how the winners would be selected. It also contained a poster showing how to get involved with the competition. The Facebook post had 21 views and three likes. The Instagram post has 30 views and five likes. Instagram seemed to consistently have more engagement with the gap between the platforms increasing again. The fifth social media post was a poster that provided information about the volunteering event that GOT organised for March 2022. The Facebook post reached up to 20 views and the Instagram post reached 32 views. Neither platform received likes for this post.

The last post was a short video about the National Geographic documentary featuring Leonardo DiCaprio's journey through five continents to document consequences of climate change. The Facebook post had 10 views and two likes; Instagram posts had 12 views and three likes.

Key findings

It was interesting to note that the post with the most engagement was the fourth post about launching the FutureFit competition. It shows that students were more interested in information about an active form of engagement rather than passive sustainability related posts. It would be worth exploring other active engagement related posts in the future, such as promoting works, volunteering events and other competitions that promote sustainability.

Sixteen people followed GOT's Facebook page while the Instagram page had more than 40 followers. More than 90 per cent of Instagram followers were current OPAIC students. All the students who followed GOT's social media platforms were from the applied management department. No other department's students followed GOT on social media. This shows that a lot of work still needs to be done by the GOT team to promote more engagement from other departments. All of the GOT interns are from applied management, which explains the level of engagement from that department.

Out of all the messages that the GOT pages have received, more than 80 per cent of them were inquiries regarding internship and part-time job opportunities. Around 15 per cent were inquiries regarding GOT projects and events. The last five per cent were about GOT's weekly newsletter. These figures reveal that most of the engagement was about employability rather than sustainability. This was due to GOT being run through OPAIC's employability department. A challenge for GOT moving forward would be to find ways to increase engagement and enquiries relating to sustainability.

INTERVIEW OUTCOMES

Data was collected from nine interviews conducted with OPAIC students covering each department, including applied management, IT, and construction. Each participant was asked the same 11 questions. The first questions asked what the participants thought the purpose of GOT was. More than half of participants correctly assumed the main purpose of GOT was to promote sustainability. Three participants had no idea what the role of GOT was. Interestingly two participants mentioned student internship management as one of the roles of GOT. This was mostly like due to GOT being run from OPAIC's employability department.

In the next question, participants were asked how they found out about GOT. A third of participants learned about GOT through their interactions with OPAIC's employability team. One of the participants was introduced to GOT at its launch ceremony. One participant found out about GOT through the OPAIC website posts and another learned about it through GOT's weekly newsletter. Two of the participants had not heard about GOT before the interview. One of the participants did see social media posts about GOT, but had no idea what it was.

Participants were then asked about their level of involvement in GOT activities throughout the study block. Only one of the participants was involved in a GOT initiative, which in this case was the FutureFit competition. A third of participants were looking for industry related events through GOT. Another third said they wanted to participate in more fun GOT events in the future. Most participants had not been involved in any GOT activities and one of them specified that they did not like participating in any extracurricular activities. One of the participants noted that they could not join any activities due to COVID-19 restrictions. One of the participants also specified interest in online sustainability events.

All participants gave recommendations that GOT could implement to improve engagement. Participant 01 mentioned that campus email and the Teams platform are the easiest and most professional ways to reach students. Promoting events directly to students face-to-face was the most effective way according to Participant 01. Participant 02 also mentioned that school email was the most effective way to approach students. The participant said that OPAIC and GOT should take more tangible sustainable initiatives. The participant believes that GOT should make some events compulsory to improve student engagement.

Participant 03 mentioned the Teams platform was the most effective communication channel. The participant said GOT should utilise Teams more to improve student engagement. Participant 04 mentioned that campus email is the easiest way to approach students. The participant was excited about the campus initiatives on sustainability and would like to contribute to that. Participant 04 mentioned that GOT should focus more on employability workshops to get more students.

Participant 05 was one of the few who said that social media was the most effective method to reach students. The participants recommend having more online-based sustainable events to accommodate students during COVID restrictions. Like most, Participant 06 said that campus email is the most professional way to reach students. The participant mentioned that GOT should collaborate with all departments at OPAIC to promote events.

Participant 07 chose social media as the easiest way to reach students. The participant explained that it is crucial for GOT to organise more online-based events during COVID restrictions to keep the attention of students. Participant 08 also chose campus email as the most approachable way to reach students. The participant also recommended promoting the events and projects of GOT in classes. Participant 09 recommended that student ambassadors promote GOT to increase awareness and participation.

Key findings

More than 90 per cent of participants mentioned campus emails and Microsoft Teams as the most effective communication channels to reach students. Of the total participants, 80 per cent chose industry-related events and fun activities as their preferred form of engagement. The rest of participants mentioned that they would like to participate in sustainability events and one of the participants expressed interest in sustainable research events.

Forty per cent of participants mentioned that they could not join campus events and projects due to COVID-19 restrictions. Some of them mentioned experiencing additional stress due to the restrictions and, as a result, they were not able to focus on extracurricular activities.

More than 60 per cent of all participants recommended organising fun and informative activities to attract more students. Almost half of participants suggested GOT organise more online-based sustainable activities and events that students could participate in during COVID-19 restrictions.

Conclusion from interview analysis

COVID-19 has led school systems across the world to shut down. Subsequently, education systems have undergone significant transformation, with the rise of e-learning and increase in remote learning via digital platforms (Li & Lalani, 2020). Based on the evaluations of the project outcomes, a lack of engagement among students for voluntary events can be identified as due to COVID-19 restrictions and distance learning.

Based on the results and analysis, we conclude that the majority of students would like to have industry-related events and activities as their first preference. This further demonstrates the confusion that students have regarding the purpose of GOT and it highlights the branding issue that the office has.

From the interviews, one can conclude that campus email and the Teams platform are the most effective communications channels GOT can use to reach students and promote their events and projects. These methods of communication are also perceived as more professional.

The social media statistics show that the majority of current OPAIC students prefer following GOT news and update posts through Instagram. The Instagram platform had a good engagement rate from the beginning, and it

kept improving over time. Facebook, on the other hand, had a higher rate of external engagement, which makes it an ideal platform for promoting GOT beyond OPAIC.

RECOMMENDATIONS

Organising a variety of short, fun, and informative events

Green Office Toitū should come up with a series of short, fun, and informative events to improve student engagement. The weekly term plan can be continually improved with reflection, engagement metrics and quality improvement techniques such as Plan–Do–Check–Act.

Acknowledgment and appreciation are vital to maintaining a good participation rate for GOT's events and projects. Acknowledgment and appreciation of participants makes them feel more valued. Making participants feel valued helps motivate them and provides a positive mind-set. GOT should take the initiative to acknowledge and appreciate the engagement of current participants. As an example, GOT can introduce a system of giving participation badges to OPAIC students who engage with GOT projects and events. This will help the participants engage more in GOT events and projects.

Green Office Toitū can also select OPAIC students and staff who have participated the most in sustainable initiatives in a given month and reward them with a prize. This prize can take the form of an environmentally friendly digital certificate to acknowledge their engagement. GOT can also post about the participant's achievement on social media platforms to spread awareness among other OPAIC students and staff.

Green Office Toitū can also collaborate with the student success team to hand out participation certificates, awards, and prizes during the Excellent Scholar Award which occurs every study block. This will also go a long way to help GOT spread awareness among the ceremony's attendees.

Improving communication

Based on the interview evaluation, the campus email and Teams platform are the preferred options for engaging with OPAIC's internal stakeholders. GOT's social media analytics concluded that the majority of current OPAIC students follow GOT on Instagram. GOT should therefore focus their efforts more to create marketing campaigns on Instagram to promote themselves and the events that they organise.

The following are the marketing actions for each platform that GOT can use.

1. GOT can create a database that includes all OPAIC staff and students. GOT can then conduct a weekly email campaign to send out to students and staff about their events and activities.
2. GOT can also create a group on Teams and invite all OPAIC students and staff to further improve engagement.
3. Instagram also offers a wide range of promotional plans. With an educational page, GOT can pay for a "Category A" promotion plan which will help them get approximately 100 followers by specifying a target audience. This will only cost them around $50.

A lack of overall engagement was also identified while observing the GOT initiatives of Block 1 2022. One way to improve student participation could be to create a Moodle course that teaches them about environment sustainability, as Moodle is the learning management platform used by OPAIC. Introducing a Moodle course provided by GOT will help introduce students to the importance of sustainability while also bringing awareness to GOT and its initiatives. Alternatively, these initiatives can be introduced at campus sustainability week.

CONCLUSION

Aotearoa's first Green Office has had a positive first study block overall. Green Office Toitū had already helped OPAIC save carbon emissions, promote sustainability to internal and external stakeholders as well as form additional industry partnerships. For this newly created alliance between OPAIC's internal stakeholders to succeed, they would need high levels of student engagement and participation. Continual growth and momentum is needed for GOT's sustainability efforts to have an impact.

Green Office Toitū has been able to attract students to their initiatives, but as the research has shown it is often for the wrong reasons. Students have confused GOT for OPAIC's employability office, which is a branding issue that the office will need to clarify. After analysing GOT's social media presence, it is clear that more should be done to improve awareness and online engagement. Focusing on Instagram should improve overall awareness of both GOT and the importance of sustainability related actions. Promoting initiatives via student email and the Teams platform will go a long way to improve student engagement and participation. COVID-19 restrictions were clearly a hindrance for many students to engage with GOT initiatives, but this should be a temporary challenge that can be overcome by having more online events. Lastly, adding a GOT Moodle course on sustainability would go a long way to introducing new students to the office while also educating them on sustainability actions that they can take to help curb emissions.

Green Office Toitū has had a few bumps along the way, but has managed to reach a positive outcome despite all the restrictions and challenges they had to deal with. They were able to bring together all of OPAIC's stakeholders and provide more focussed sustainability initiatives that all parties could partake in and support. These benefits are not only restricted internally as GOT's projects also had a positive impact on the local community. Forming industry partnerships around sustainability projects, participating in a council run sustainability competition, planting trees in the Auckland area and providing sustainability tips and educational pieces on social media have benefitted the local community around OPAIC as well. The Green Office Movement and GOT in particular is an area of interest for future research that could lead to an improved understanding of how to best manage a sustainability office to maximise its impact on society.

Christiaan Bredenkamp is a researcher currently employed at Otago Polytechnic Auckland International Campus. From industry research and analysis for consultancy projects, he progressed to an academic career in continental philosophy specialising in psychoanalytic philosophy and philosophy of economics. His strong academic and professional background in research creates collaboration with international partners in many academic disciplines and industry sectors. Email: christiaanb@op.ac.nz

https://orcid.org/0000-0003-0350-1401

Shehan Anjana is a researcher and graduate of applied management at Otago Polytechnic Auckland International Campus. His research is all about sustainable development and situational leadership across different cultural contexts. Particular interests include sustainable organisational leadership and its ramifications and effects on different aspects of economy, environment, and society.

https://orcid.org/0000-0001-5004-9353

Dani Mao has worked in higher education as Academic Service Manager, Senior Lecturer, and Internship Project Coordinator, and is currently Senior Employability Manager at OPAIC. She also has ten years of international project management and business consultancy experience before moving to New Zealand. She has initiated the creation of Green Office Toitū as an official sustainability hub on campus to inspire collaboration on sustainability research with local and international partners.

https://orcid.org/0000-0001-8192-179X

Marianne Cherrington is a Manager at the Electrical Training Company. Data-driven decision-making in industry is an ongoing motivation, with a current focus on organisational sustainability and carbon reduction strategies. Doctoral research into machine learning feature selection algorithms applies in many fields, producing interesting collaborations with local and international partners in many disciplines and sectors.

https://orcid.org/0000-0002-1240-2010

REFERENCES

FutureFit. (2022). *About*. FutureFit. https://www.futurefit.nz/about

Galdón, C., Haanaes, K., Halbheer, D., Howard-Grenville, J., Le Goulven, K., Rosenberg, M., Tufano, P., & Whitelaw, A. (2022, February 1). Business schools must do more to address the climate crisis. *Harvard Business Review*. https://hbr.org/2022/02/business-schools-must-do-more-to-address-the-climate-crisis

Green Office Movement. (2018). *Green Office Movement*. https:///www.greenofficemovement.org

Hughes, K. (2021, August 12). *Defining student engagement at your institution* [Blog post]. Mainstay. https://mainstay.com/blog/defining-student-engagement-at-your-institution/

Jain, E. N., & Jain, T. K. (2019). Sustainable development through student engagement: Innovations and initiatives in higher education. https://ssrn.com/abstract=3314509

Li, C., & Lalani, F. (2020, April 20). The COVID-19 pandemic has changed education forever. This is how. *World Economic Forum*. https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/

Macdonald, N. (2021, March 28). *More than 300 old dumps at risk of coastal erosion and flooding*. Stuff. https://www.stuff.co.nz/environment/124123042/more-than-300-old-dumps-at-risk-of-coastal-erosion-and-flooding?rm=a

Ministry for the Environment. (2021, September 9). *Estimates of waste generated in Aotearoa New Zealand*. https://environment.govt.nz/facts-and-science/waste/estimates-of-waste-generated/#types-of-waste-going-to-class-1-landfills

Ministry of Transport. (2020). *Climate change: Emissions work programme*. Ministry of Transport. https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/climate-change/

Office of Sustainability. (n.d.). What is sustainability? McGill University. https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf

Otago Polytechnic. (2013). Sustainable practice strategic framework. Otago Polytechnic.

Salvioni, D. M., Franzoni, S., & Cassano, R. (2017). Sustainability in the higher education system: An opportunity to improve quality and image. *Sustainability, 9*(6), 914. https://doi.org/10.3390/su9060914

Students Organizing for Sustainability International. (2021, February). *2020 survey: "Students, sustainability and education."* https://sos.earth/survey-2020/

Wu, D. W. (2015). A student-led participation approach to attaining sustainability on campus. *SpringerPlus, 4*(S2), P8. https://doi.org/10.1186/2193-1801-4-S2-P8

Žalėnienė, I., & Pereira, P. (2021). Higher education for sustainability: A global perspective. *Geography and Sustainability, 2*(2), 99–106. https://doi.org/10.1016/j.geosus.2021.05.001