# Spaces and Pedagogies

Spaces and Pedagogies: New Zealand Tertiary Learning and Teaching Conference 2017 Proceedings

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# CONTENTS

# INTRODUCTION

## LUCY PATSTON AND SIMON NASH

The 2017 National Tertiary Learning and Teaching Conference was hosted by Unitec Institute of Technology in Tāmaki Makaurau Auckland, New Zealand. The conference theme was Spaces and Pedagogies. Over two days, 170 delegates explored how the spaces that we teach in, whether real or virtual, cultural, social, commercial or otherwise, could be best designed for our learners. Conference strands delved into the design of learning environments and learning practices, with particular attention on how they reflected our students' lived experiences, catered for our students' practices, realities and traditions, and met the needs of employers and other stakeholders.

These proceedings are a partial record of the conference. We are very grateful to those conference presenters who developed full papers for these proceedings.

## EXPERIENTIAL SPACES: LEARNING THROUGH REFLECTION ON AND IN PRACTICE

Ivor Heijnen from Ara Institute of Canterbury describes a challenging ten-day journey in Arthur's Pass undertaken by outdoor education students. This immersive experience through mountains led students to create deep connections to place along with critical understandings of environmental problems.

Ron Nicholls from the University of South Australia, and co-authors, share a similarly challenging process of 'learning on country' – an experiential pedagogical collaboration between Master of Design students and the Raukkan Aboriginal community in South Australia. In this physically remote and culturally dense space, values and beliefs were challenged and creative tensions harnessed towards gaining shared understandings of culture and environment.

Locally, John Stansfield from Unitec Institute of Technology considers the benefits for Social Practice students of learning outside the classroom on a picket line and at a protest march. Such actions are entered into to educate critical, reflexive social workers as part of community development praxis.

## WORKPLACES AND PROFESSIONAL LEARNING: BRINGING LEARNING AND PRACTICE TOGETHER

Stephanie Kelly and co-authors from Whitireia New Zealand examines the effectiveness of a trans-disciplinary professional programme in health and social services that prepares practitioners for the complex, inter-professional spaces that they work in. Similarly, Herbert Thomas and co-authors from The Mind Lab by Unitec in Auckland explore the value of work-integrated learning in leadership training for teachers as a way to change practices and, more specifically, beliefs about leadership.

## HIGH-TECH SPACES

Lynley Schofield and co-authors at The Mind Lab by Unitec research the use of video-based evidence as an effective form of assessment, while Hugh Wilson and David Phillips from Unitec institute of Technology consider the benefits and limitations of a 'flipped learning' approach.

David Parsons and co-authors from The Mind Lab by Unitec explore the use of 'crowdsourcing' as a method to gather views about the future of education. Here, the far reach of digital 'space' allows the researchers to capture wide-ranging views on education.

## COLLABORATIVE SPACES: SPACES RESPONSIVE TO DIVERSITY

Sharleen Howison from Otago Polytechnic and Xiaolan Zhou from Qingdao University in China investigate the importance of effective cross-cultural spaces to success for Chinese students in New Zealand. Similarly, Madeline Carroll from NMIT and Deryn Hardie Boys from Victoria University examine a learning environment that aims to be responsive and authentic for international English-language students working as government officials.

Stephanie Sheehan and co-authors from Unitec Institute of Technology describe their co-construction of a learning space where bridging education students can thrive. Here, students from diverse backgrounds, including those with Māori and Pasifika heritages, are encouraged to be creative and to share cultural values.

These proceedings would not have been possible without a huge amount of support from our conference team. Particular thanks go to our editorial team Laura Stephenson, Gwynneth Porter from ePress, Marie Shannon, our review committee and all reviewers, and our Committee Chair Dr Lucy Patston.

# LISTENING TO LEARNERS

# LEARNERS' PERCEPTIONS OF BENEFITS FROM AN ENGLISH LANGUAGE TRAINING COURSE

MADELINE CARROLL
DERYN HARDIE BOYS

## ABSTRACT

This study investigates the perceptions of achievement of two groups of Timor-Leste government officials studying on the English Language Training for Officials (ELTO) programme. This programme is a New Zealand-based English language training programme funded by the New Zealand Aid programme within the Ministry of Foreign Affairs. The objective of the study was to go beyond language proficiency testing to investigate learners' views about what learning activities were most effective. In particular, the study examines the impacts of independent and task-based learning within the ELTO programme.

Two groups of interviews took place: the first group of five alumni from previous ELTO courses and were interviewed in Timor Leste , while the second group of six officials were interviewed in New Zealand in 2016 at the end of their five-month course. Interviews with two staff members from New Zealand Aid in the New Zealand Embassy in Dili, Timor-Leste, helped to validate accounts of improved professional competence.

Interviewees reported growth in confidence and English skills, improved professional skills and knowledge, and expanded networks and cultural awareness. Participants particularly appreciated the course focus on themes related to their jobs and opportunities for activities outside the classroom, such as workplace visits and social activities. The research project and the development of time management, and opportunities for independent learning were also important for many of the interviewees.

One of the limitations of the study was the small number of participants from one country. There are future research opportunities to track career pathways for participants on other English for Specific Purposes (ESP) courses.

## INTRODUCTION

The purpose of this study was to identify learner perceptions of undertaking five months' study in New Zealand on the English Language Training for Officials (ELTO) programme, which aims to improve English language and professional skills in participants' government jobs.[1] The programme needs to be responsive to stakeholders, particularly the New Zealand Ministry of Foreign Affairs and Trade, and key ministries from participating countries, which has resulted in regular adjustment of the course themes and delivery modes. As a publicly-funded programme, there is rigorous monitoring and evaluation of course deliveries. However, there have been only limited anecdotal accounts of the positive longer-term changes in the lives of participants, such as improved skills and confidence, promotion, and opportunities for further study.

The ELTO programme, supported by the New Zealand Aid Programme within the Ministry of Foreign Affairs and Trade, primarily aims to build the English language capacity of government officials in Asia (New Zealand Foreign Affairs and Trade, n.d.), and also to develop transferrable skills, such as time management, critical thinking and research skills in the participants. Since 1991, over 1300 officials from the governments of Cambodia, Indonesia, Lao PDR, Mongolia, Myanmar, Timor-Leste and Vietnam have been trained (New Zealand Foreign Affairs and Trade, n.d.). Currently, up to 128 participants are trained per year (New Zealand Foreign Affairs and Trade, n.d.).

The ELTO participants are generally aged between 25 and 45 years. In order to be selected for the programme, they must have completed tertiary education, have an IELTS score between 4.5 and 5.5 and have a range of professional skills (New Zealand Foreign Affairs and Trade, n.d.). Participants must work in roles that require reasonable proficiency

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1    See Appendix 1 'Graduate Attributes'.

in English language, such as attending Association of Southeast Asian Nations (ASEAN) meetings and working with donor representatives. Each ELTO course intake targets a specific government sector, such as education, agriculture or governance. Participants need to have a direct connection with the course theme, preferably in a technical and policy role (New Zealand Foreign Affairs and Trade, n.d.).

Part One of the ELTO programme involves seven weeks of study either at the Nelson Marlborough Institute of Technology (NMIT), or the Eastern Institute of Technology (EIT). During this part of the programme, the officials live with homestay families and study full-time to build their language proficiency and knowledge about New Zealand. Part Two is a 13-week course involving full-time study at Victoria University of Wellington. The students study in four small classes (14 to 16 students), based on language proficiency, with consideration also given to gender and nationality balance. During this time the officials live independently, but they are matched with a volunteer conversation partner for language practice and social events.

The ELTO programme is an ESP course for early- to mid-career government officials to improve their language proficiency (speaking, listening, reading, writing, vocabulary and grammar knowledge) while studying a theme (e.g., education, agriculture, governance) related to their government ministry or organisation. Much of the programme is task-based, and designed to create a variety of learning experiences to encourage learner autonomy.

Developing autonomous and self-managing learners is a key goal of the programme. Learners are guided to be more independent by identifying individual strengths and weaknesses, setting specific learning goals, receiving direct instruction in language learning strategies and having regular 30-minute, one-to-one 'learning conversations' with tutors. At the beginning of the course learners spend about four hours a week in independent study, but as the course progresses they are expected to manage a larger amount of independent study with less support. Individualised learning support and structured independent learning play central roles in assisting the officials to maximise the learning opportunities of studying in an English-immersion environment.

Language acquisition studies show that authentic project and task-based activities are motivating, promote learner independence and facilitate language acquisition (Ellis, 2003a). Therefore, a major part of the ELTO programme is structured around an individual research project on a topic related to each official's professional interests, with workplace visits linked to this project. The project requires each official to apply research skills and independent work habits to produce a report. Another ELTO course task is a 10-minute presentation which may be linked to an official's professional interests and research project, or to a significant issue facing their country. Again, this task requires independent research, and meaningful use of language to communicate with their peers. The workplace visits, research report and presentations are designed to encourage authentic communication, facilitate autonomous learning and critical thinking skills, which enable learners to use experiences to develop their understanding, to solve problems and apply knowledge in variety of situations (Benson, 2001).

Specifically, the researchers in this study chose to investigate three possible areas of change for the Timor-Leste ELTO alumni: 1) empowerment through improved language skills, 2) expanded professional knowledge and capabilities, and 3) increased intercultural awareness of participants from other countries, including New Zealand, by interviewing two groups of course participants.

Timor-Leste officials were chosen for this study for several reasons. Timor-Leste is the newest independent country in the Asia-Pacific region, having gained independence from Indonesia in May 2002 after 25 years of armed struggle (United Nations Development Programme, 2012). At the time of independence, as much as 70 percent of the country's infrastructure was destroyed (United Nations Development Programme, 2012). Consequently, the country faces enormous development challenges in rebuilding the nation. The lack of educational facilities and disrupted schooling within the population means there is a shortage of human resources, greater than in any other country participating in the ELTO programme. Not surprisingly, in a 2012 survey, the Timor-Leste officials self-identified as the country group with the greatest need compared to the other ELTO-participating countries (Hardie Boys, 2012). The ELTO programme is important to Timor-Leste's development and ASEAN membership aspirations (Kibblewhite & Cahn, 2014).

## METHODOLOGY

The first set of interviews took place in November 2016 in Dili, Timor-Leste, with five alumni. At the same time, in order to validate alumni perceptions of improved professional competence, two New Zealand Aid office staff members, who have known the alumni for some time, were interviewed. The second set of interviews took place in Wellington in December 2016 with the six Timor-Leste participants from ELTO Intake 43, which was a course focused on agriculture.

The researchers decided that face-to-face interviews would give participants an opportunity to reflect and expand on their answers in a way that online or questionnaires do not. All ELTO participants completed extensive questionnaires regarding their level of satisfaction with the ELTO programme on the completion of each of the two parts of the course, so it was hoped that the interviews used in this research would allow for more social interaction.

## INTERVIEWS IN TIMOR-LESTE

Timor-Leste alumni from the past four years were emailed and invited to take part in the study. The interviewees were self-selected due to availability and willingness to participate. All interviewees were informed about the purpose of the study, gave permission for audio recordings and later received a summary of the interview. Five ELTO alumni were interviewed using semi-structured interview questions which allowed new ideas to be brought into the interview. The interviews were conducted around the availability of the interviewees, two individually and three in a small group. Each interview lasted 45 to 60 minutes and was carried out in the home of a Volunteer Service Abroad (VSA) volunteer who they all knew well, thus encouraging a relaxed, informal situation. The interviewer also had an opportunity to meet a further four alumni at social occasions.

The ELTO alumni interviewees were asked about:

- their confidence using English
- their ability to keep improving their English
- any useful professional knowledge or skills gained while studying in New Zealand
- whether they had kept in touch with New Zealand homestays or ELTO classmates from other countries.[2]

Additionally, two New Zealand Embassy staff members who have continuing contact with ELTO alumni were interviewed about their impressions of improvements in the English language and professional skills of alumni. The Embassy does not permit audio recordings, but notes were taken. The staff members were sent a copy of the notes.

## INTERVIEWS IN WELLINGTON

In Intake 43 (July to December 2016) there were six officials in the Timor-Leste country group. After approval was gained through the Victoria University Ethics Committee, written permission was sought from each participant and all gave consent to be part of the study to explore how the ELTO programme had benefited them. Each of the officials was interviewed individually using twelve structured interview questions. The use of a predetermined set of questions meant all interviewees were asked the same questions in the same order. Each participant was asked questions regarding their:

- perceptions of improvements in using English
- perceptions of their time management and ability to work independently
- expanded professional knowledge and capabilities

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2    See Appendix 2 for Timor-Leste questions.

- increased intercultural awareness.[3]

The interviews were recorded, and later transcribed and analysed. Key words and phrases were highlighted and grouped according to reoccurring themes in the responses to the questions. The participants were sent a copy of their transcribed interviews.

## FINDINGS

The findings presented below are expressed in the learners' voices, as this paper is geared around 'listening to learners'. The ELTO programme focuses on language training and imparting content knowledge in order to build the capacity of the government officials for their jobs. It is worth noting, with regard to quoted passages in this text, that native speakers frequently recast their expressions in spoken English and that grammatical accuracy is a developmental process and consistent change is very difficult to achieve. The findings have been separated into two groups: Language/Vocational and Cultural/Social.

## INTERVIEWS IN TIMOR-LESTE

## A. Language/Vocational

All the interviewees emphatically stated that their English-language skills had improved and they felt much more confident, particularly when using English in work situations. They gave many examples of how this has changed the way they work including:

> "It's easier when I meet some police from New Zealand. … We have confidence to talk with them in English."
> "I am confident to talk with the ministers and people from overseas. … My ideas are more clear compared with before."
> "Yes, very much changed, like the skills about how to decide something, manage some project."

The interviewer, the New Zealand Embassy staff and VSA staff in Timor-Leste all noted striking growth in the personal confidence and manner of many of the alumni since studying in New Zealand:

> "Of course there are improvements. Before the course they are very shy, not confident. After, they are more confident in everything and English … their demeanour changes. They can relate in a freer, easier way with New Zealanders and English-speaking people."

> "X communicates with ease with foreigners. For example, she works with a team of [foreign] advisors and she engages well with them, with the project. She is confident to take decisions, has a clear idea of what she wants to do and is not shy to give opinions."

Similar comments about personal confidence and ease of communicating with foreigners were made by VSA volunteers who know the ELTO alumni.

As a direct result of improved English and professional knowledge and skills, many ELTO alumni have increased work responsibility, been promoted to senior positions or been awarded further scholarships to study overseas.[4] Both Timor-Leste and New Zealand Embassy staff acknowledge that the programme seems very good preparation for participants' career advancement and overseas postings.[5] Several of the interviewees commented on the usefulness of their improved presentation skills, which resulted in them giving presentations both in Timor-Leste and overseas,

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3    See Appendix 3 for Wellington questions.
4    From personal communication with Timor-Leste ELTO alumni and with New Zealand Aid staff in Dili.
5    From personal communication with New Zealand Aid staff in Dili and Wellington, and Timor-Leste Embassy staff in Wellington.

in English and in other languages including Indonesian, Tetum and Portuguese, demonstrating the transferability of these skills. Two of the interviewees had represented Timor-Leste at international conferences, and attributed this to their improved English proficiency and confidence to give presentations:

"…when I got experience of ELTO, I found how to arrange words, how to make good sentences."

"Practice giving presentations during the ELTO course was very, very useful. It makes me confident to speak to all people, to talk to others. … I prepare for my chief the presentation – she trusts me because I am alumni of ELTO."

"…how to organise the meetings, the discussion, making decisions, how to say the first words when I open a meeting."

New Zealand Embassy staff also commented on the value of improved presentation skills, and of familiarity with the process of formal meetings:

"Presentation skills are very important, for example for ASEAN meetings."

Workplace visits and interviews with New Zealand government counterparts appear to be highly valued by both alumni and the New Zealand Embassy staff. The experiences of workplace visits and authentic language situations appear to be very motivating and to offer substantial learning opportunities.

"Because of the experience of visiting schools – we can see it's very different. When we visit schools [in New Zealand], we can see the conditions, how the students learn and we can compare it with Timor-Leste. For example, now we do monitoring and evaluation and visit schools in other districts [in Timor-Leste]. When I visited, I saw directly and I could make comparisons."

"Understanding New Zealand police approach and systems, especially community policing, helps us to work with New Zealand police in Timor-Leste."

## B. Social/Cultural

The interviewees affirmed that the professional networks formed among ELTO alumni were important. Comments about homestays, and the friendships maintained with ELTO participants from other countries, clearly demonstrate that these international connections are valued. Cross-cultural awareness leads to reflection about one's own culture, for example, greater awareness of gender issues:

"Especially for homestay life and life-style, wife and husband are equal. One day [in Timor- Leste] will be the same (laughter), and now I can cook!"

"They keep in touch with ELTO alumni. For example, they report that they have met colleagues overseas in Vietnam and Laos. One Foreign Affairs person is now posted to Myanmar and reports meeting ELTO alumni there."

## INTERVIEWS IN WELLINGTON

## A. Language/Vocational

All the interviewees were positive about the language improvements they had made during the course. Their comments focused on speaking and writing activities, as well as independent study.

"Before I came here I was living with my broken English, but after I attend the ELTO programme here at least I can make some improvement of my English for my speaking."

"…now I know better how to write, to express … all I want to write about."

"I think the independent learning strategy is very useful for us because with this it can help you … plan for your study, what you want to study. It means you have to ask yourself… you have to find out your weaknesses and strengths. Through this guide it can help you which area you want to improve during this course."

As with previous groups, increased English language proficiency contributed to increased confidence to carry out work-related tasks and to communicate with people from other countries.

"…after we learn how to improve everything, we have confident now. So it motivate[s] us to go and then to speak out to the people or to make friends."

Participants gave a range of responses about activities they found easier to do as a result of the programme, including speaking with and in front of others, managing time, understanding more vocabulary and listening comprehension:

"By doing this presentation, it helps us how to manage, how to overcome our fear, how to improve our speaking in front of the public."

"There is something useful that [I] learned here … for time management. For human resource[s], or how to implement, how to achieve the target for better future."

"So after we came here I feel some things are easier than before. … It helped because as a government official, everything has to be official, so it is related to the academic words."

"Before if I speak with the native language experts from X when they were working in Timor-Leste, I really confused when they were speaking English. But nowadays … I think I can catch what the people say … around 80%. [It is] very helpful to me."

All the Wellington interviewees identified that becoming more independent learners was a positive outcome of the course. They were adamant that their organisational skills, particularly in terms of time management, had improved. Although they had found that prioritising their classroom assignments, homework and independent learning was challenging, most of them commented that learning to plan and use time management strategies had benefited them in their study and in their future careers. Such comments included:

"I learn[t] the benefit of time management [in the ELTO programme], because when you are using your time … to improve, you will become good in your career, I think."

"This [planning learnt in the ELTO programme] is one thing that is very important. This is the simple one, but this will change everything."

Many of the Wellington interviewees commented on the value of the tasks they were required to do in the language-training programme. They reported that they valued the enhanced research skills exercised in their individual research projects.

"The research report is quite challenging. … I think it is very helpful. … We have to write reports to our superior."

"They push us to how to write research linked to our country and New Zealand. This is a very good way for me. I really like this programme."

The presentation strand of the programme assisted their confidence levels when presenting, and the officials commented on the fact that presentations were authentic workplace tasks which would help them in their future work.

"…for me especially the confidence of talking in front of an audience."

"[Presentations] needs most by us because when we are doing work back home we have to go to the public and speak."

The interviews demonstrated that the workplace visits generated considerable insight and learning. This was particularly interesting considering the relatively small amount of time spent on these visits. Each participant had two or three opportunities to spend about one to two hours at a workplace related to their professional interests and their research project. For many, workplace visits were motivating and useful:

> "Workplace visits [are] very useful for me. … When we go to talk to them, [we] ask questions about information related to our work."

There were some pertinent comments about information participants would like to share and changes they would like to implement in their workplaces. These comments demonstrate both increased understanding of development issues and policies, and confidence to act.

> "We will bring a new experience to our country. … Maybe we can bring a new opinion to our manager or director to… change something."

## B. Social/Cultural

The interviewers were impressed by the emphasis placed on sharing information, cultural awareness and development experiences with classmates from different countries, as well as with New Zealanders. In class, students typically worked in mixed nationality groups to share ideas, which provided cultural and content learning opportunities, including skills of working in a team. The officials' comments revealed the strong friendships made with people from other countries and the value they placed on learning about other cultures. There were several comments on the value of sharing with a flatmate from a different country and of the importance of conversation buddies. This building of personal networks and cultural awareness is a stated aim of the ELTO programme (Accent Learning, 2016):

> "[In a] different culture [it] is very important for us to learn together and know each other, and it will make us together to go and improve what we want to achieve…"

> "ELTOs [from other countries are] very, very good friends."

The Timor-Leste students also valued opportunities they had to experience New Zealand's indigenous Māori culture:

> "…we learn especially about Māori culture because they invite us [to] their marae and then we learn, they explain about New Zealand Māori culture for us. It was something new for me, because when I just stay [in] my country I didn't know. I didn't know what New Zealand look like, what culture New Zealand has compared with other countries."

## CONCLUSION

The growth in personal and professional confidence of ELTO alumni was striking. The interviewees attributed this confidence to improved English and professional skills, such as giving presentations and managing meetings. The researchers believe it is also a result of encouraging autonomous learning and the use of authentic tasks related to their work. It is evident that the structured approach to encouraging independent learning was successful for the majority of these programme participants. Time-management skills and the ability to prioritise tasks enabled them to manage a heavy study workload. Perhaps, more importantly, the participants recognised the value of being able to manage their ongoing learning and the ability to apply these skills in their professional lives.

The research project component, although challenging for some of the group, was motivating because it was so closely linked to their work. It enabled them to research a topic which they had knowledge of and interest in, and provided a professional focus for the workplace visits. The appreciation of opportunities to deliver prepared presentations, and of professionally-related workplace visits, reflected the value of these aspects of the programme to the students.

The real communication that occurred as a result of workplace visits and the research project appear to have been very motivating and engaging. These activities contributed to a growth of confidence in the participants' ability to manage authentic professional communication, and contributed to new understandings related to their work and economic development in their country and the region.

The interviewers were impressed by the fluency and eagerness of the Timor-Leste group to share their feelings about the programme and by the reflective nature of many of the comments. The thoughtful and perceptive comments of the interviewees, both in Dili and in Wellington, demonstrated a range of changes as a result of their study, including growth of personal confidence, improved English-language skills, and expanded professional knowledge and capabilities.

The scope of this study is limited to a small number of participants from one country and to only one programme. It is also worth noting that the respondents in the alumni interviews were only those who chose to participate. This may have skewed some of the findings in favour of those who had a positive experience of the ELTO course. However, on balance, comments by the New Zealand Aid staff in the New Zealand Embassy in Dili helped to validate accounts of improved professional competence amongst the alumni.

This study only begins to touch on the value of tracking career pathways for students in English for Specific Purposes programmes such as ELTO. Potentially these students will receive promotions and move to positions of greater responsibility, change organisations they work for and receive scholarships for higher-education programmes. Conversely, early-mid-career officials may encounter blocks to career progression, especially if they are women. The impact of increased language proficiency on career advancement is an interesting area for future research.

In summary, this study suggests that the use of professionally- or vocationally-relevant content and task-based learning is likely to be motivating and confidence-building for a variety of adult students across different types of ESP programmes. Similarly, the use of a scaffolded approach to encouraging self-directed learning is important for building confidence and encouraging autonomy. As teacher-researchers, listen to your learners' voices – they will have much to teach you.

## REFERENCES

Accent Learning. (2016). *English Language Training for Officials Programme. Phase four curriculum overview.* Wellington, NZ: Accent Learning.

Benson, P. (2001). *Teaching and researching autonomy in language learning.* London, UK: Longman.

Ellis, R. (2003a). *Task based language learning and teaching.* Oxford, UK: Oxford University Press.

Ellis, R. (2003b). Designing a task-based syllabus. *Regional Language Centre Journal, 34*(1), 64-81.

Hardie Boys, D. (2012). *Preparation in Dili, immersion in New Zealand.* Paper presented at the Australian Council of TESOL Associations, Cairns, Australia. Retrieved from www.tesol.org.au/files/files/239_Preparation_in_ Dili_Immersion_in_New_ Zealand_abridged.pdf.

Kibblewhite, A., & Cahn, M. (2014). *Evaluation of the English language training for officials and English language training for senior officials programmes: 2009-2013*. Wellington, NZ: New Zealand Ministry of Foreign Affairs and Trade.

New Zealand Foreign Affairs and Trade. (n.d.). *Types of scholarships.* Retrieved from https://www.mfat.govt.nz/en/ aid-and-development/scholarships/types-of-scholarships.

United Nations Development Programme. (2012). *About Timor-Leste.* Retrieved from http://www.tl.undp.org/ content/timor_leste/en/home/countryinfo.html.

Willis, J. (1996). *A framework for task based learning.* London, UK: Longman.

## APPENDIX 1

### Graduate Attributes, ELTO programme

The design of the ELTO programme will be guided by the goal of 'assisting participants' development of English language skills relevant to their work environment and to build relationships with regional counterparts'[6] the outcomes listed in Section 3.2 of the *Phase Four Curriculum Overview* (Accent Learning, 2016) and the graduate attributes arising from these:

1. Culturally aware, competent communicators in English, both orally and in writing.
2. Able to understand and interpret information in English from different written and oral sources.
3. Confident participants in meetings and negotiations.
4. Autonomous language learners able to use ICT and unsimplified English resources.
5. Well-informed and articulate cultural ambassadors for their own countries.
6. Knowledgeable about New Zealand culture, policy and approach to development.
7. Well-connected with and well-disposed towards New Zealanders.
8. Well-connected with colleagues from other participating countries.
9. Able to take on projects and carry them out independently or collaboratively with international partners.

English Language Training for Officials Programme Phase Four Curriculum Overview, (2016).


## APPENDIX 2

### Interview Questions in Timor-Leste

- Do you feel your language skills, particularly in English, improved as a result of the ELTO programme?
- Are you more confident to use English in work situations now?
- Have you been able to keep improving your English skills since returning home?
- Have you noticed any changes in the way you work since returning home?
- Did you gain useful professional knowledge or skills while in New Zealand?
- Have any of your colleagues or managers commented on any improved skills since you returned home?
- Have you been able to keep in touch with your New Zealand homestays or ELTO classmates from other countries?


## APPENDIX 3

### Interview Questions in Wellington

Change 1 (empowerment through improved English-language skills)

- What course activities have helped improve your language skills?
- What changes have you observed in your language skills?
- What activities are easier to do now than when you started part one?

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6    Request for Expressions of Interest, p. 1.

- Have you become a better-organised worker? How?
- Have you become a more independent learner? In what ways?

Change 2 (expanded professional knowledge and capabilities)

- Do you feel more confident to research information than when you began the course?
- What did you learn from the workplace visits in part one and part two?
- Do you think you will do your job differently when you go home?
- What course activities have helped expand your professional knowledge and capabilities?

Change 3 (increased intercultural awareness of other participants and New Zealanders)

- Did you enjoy your homestay experience? Why/why not?
- What did you learn from working in groups with other country members on the ELTO course?
- What course activities have helped increase your intercultural awareness?

## AUTHORS

Madeline Carroll is an English language (ESOL) tutor at Nelson Marlborough Institute of Technology where she has been involved with teaching, coordination and course development of ELTO, General English and English for Academic Purposes. She has a particular interest in encouraging strategies for independent learning. Madeline is the current Chair of the Nelson branch of TESOLANZ (NATESOL).

Deryn Hardie Boys is Senior Teacher at the English Language Institute, Victoria University of Wellington, where she teaches and coordinates part two of the English Language Training for Officials (ELTO) programme. In 2012 she taught a short course in Timor-Leste, and since then has looked for opportunities to present findings from short research projects about capacity building in the Asia-Pacific's newest independent country.

# A SHARED SPACE

# AN INNOVATIVE APPROACH TO INTER-PROFESSIONAL EDUCATION IN NEW ZEALAND

## STEPHANIE KELLY
## JOEY DOMDOM
## RUTH CRAWFORD
## MARIA ULLOA

## ABSTRACT

This presentation describes a research project that aims to understand the experiences, needs and effects of the Whitireia/WelTec Master of Professional Practice (MPP) in Health and Social Services as a suite of programmes for students, graduates and industry stakeholders. Evaluating inter-professional education programmes and outcomes is becoming paramount in the emerging field of inter-professional practice.

This research seeks to evaluate how effectively the programme is meeting the needs of all programme stakeholders. It will inform curricular and programme development as well as adding to the body of knowledge in the inter-professional education field, aiming to influence outcomes for students, employers, industry, and health and social services clients. The research primarily asks: What are the experiences, needs and effects of the Whitireia/WelTec Professional Practice suite of programmes for students, graduates and stakeholders?

This project uses exploratory qualitative formative observations of engagement in class and online student assessments, student research projects, and qualitative interviews with the programme teaching staff, students and stakeholders. This research is being conducted in two stages. Stage one involves content analysis of documentation related to the Professional Practice suite of programmes, including a sample of student summative assessments, students' online discussions, and formal and informal student course and programme evaluations and reflective exercises. Stage two will involve focus groups with students, and face-to-face individual interviews with programme staff and stakeholders. Content (stage one) and thematic analysis (stage two) will be used in this research.

This paper presents preliminary findings from stage one of the study only.

## INTRODUCTION

### The need for transdisciplinary practice

Health and social service delivery is required to be increasingly collaborative and interdisciplinary. It is essential that health and social service professionals use an integrative and inter-professional approach to navigate the complexities of the health and social service practice environments. Terms such as 'multidisciplinary practice', 'inter-professional collaboration', 'inter-professional education' and 'trans-professional practice' are commonly used across a range of social services and health providers.

### Education needed to suit health/social industries

In Aotearoa New Zealand, one example of a health and social services inter-professional collaborative approach in curriculum design is the development of an innovative suite of tertiary programmes at levels 8 and 9, including the Master of Professional Practice, Postgraduate Diploma in Professional Practice, and Postgraduate Certificate in Professional Practice. These qualifications are the result of a strategic partnership between two tertiary institutions – Whitireia New Zealand (Whitireia) and the Wellington Institute of Technology (WelTec) in Wellington. Teachers and students in the programmes come from a diverse range of cultural, professional and personal backgrounds. In terms of students' cultural background, 24% identified as Māori, 33% as Pasifika and 56% as European/Pākehā/other.

Observation by teachers in the Professional Practice suite (PP) and students' reflective writing feedback indicate that students are coming to the PP with a range of different needs and interests. Some of these are specific to discipline

areas, and some are common issues of contemporary PP. They also bring diverse cultural identities to the programmes.

## Description of the suite of programmes and rationale

The programme courses use a blended learning approach incorporating the values and pedagogies of inter-professional education. Students are actively engaged in PP while undertaking their programme of study. The underpinning rationale for the PP suite of programmes is to provide practitioners in health and social services with the competencies required beyond their discipline-specific training to enable them to function in the complex inter-professional spaces that characterise their professional work environments. The programmes provide a framework for health and social service professionals to advance their scholarship, research skills and inter-professional competencies.

When constructivism is the epistemological methodology, professionals examine their practice in depth by deconstructing their professional knowledge and habitus (Bourdieu, 2005), and understanding what underpins their practice, its complexities and its potential. In line with this, particular foci for the programme include working with diversity, research for evidence-based practice and practice-based evidence, inter-professional education, and practice and leadership capability. These PP qualifications are designed to offer an alternative to discipline-specific qualifications and augment clinical/vocational programmes of study.

The PP suite of programmes qualifies graduates to apply a body of knowledge in a range of professional contexts in health and social service settings, including research, education for practice, policy, and leadership. Extended roles and new service delivery models are emerging in the health and social service sectors, which require skills, competencies and knowledge beyond traditional professional discipline-specific paradigms. Change and complexity (including increased diversity) are hallmarks of contemporary practice (Kannampallil, Schauer, Cohen, & Patel, 2011; Tope & Thomas, 2007). Practitioners need to be capable of leading, innovating, and working across sectors, using the best evidence for the benefit of diverse people and communities they engage with. A key point of difference for these programmes is that they are designed to cross traditional professional discipline boundaries and employment sectors to develop skills related to contemporary workplace needs (Leckie, 2011).

The effect of contemporary globalisation, represented in immigration, demographic shifts, technological development and newly emerging health and social challenges, are changing working environments and requiring knowledge and skills beyond traditional professional education paradigms. The health and social service workforce is already well served with discipline-specific postgraduate education such as nursing, social work, paramedicine, addictions and counselling. Graduates of the PP suite of programmes are instead equipped for advanced PP characterised by scholarship, research, leadership and inter-professionalism (WelTec/Whitireia, 2016, p. 5).

## Literature review

In this section, literature exploring the need for inter-professional education in the health and social services environment is examined. Health and social service work environments are becoming increasingly inter-professional, diverse and complex. Given this complexity, inter-professional teams capable of implementing new models of care are essential in ameliorating the tendency to deliver the fragmented care approaches that frequently dominate health and social organisations (Kannampallil, Schauer, Cohen, & Patel, 2011).

Inter-professional education (IPE) provides the means to improve both professional and inter-professional practice (IPP) (Crawford, Gallagher, Harding, McKinlay, & Pullon, 2016). The World Health Organization (WHO) recognises that an outcome of IPE is to educate professionals with skills to contribute at a community level by promoting mental, physical and social wellbeing (WHO, 2010). In their *Framework for Action for Collaborative Practice*, the WHO highlighted that both health and education systems must work together to coordinate workforce strategies (WHO, 2010). There is a need for integration of planning, research and policymaking in order for inter-professional education and collaborative practice to be fully implemented and supported.

Research on the effectiveness of IPE has been conducted in the last decade. A systematic review of literature by Hammick, Freeth, Koppel, Reeves and Barr (2007) found that staff development is an important influence on the effectiveness of IPE for learners. These authors highlighted that the design of an authentic and customised curriculum is an important mechanism for positive outcomes of IPE. The studies reviewed by these authors concurred that in the context of quality-improvement initiatives, inter-professional education is commonly utilised as a mechanism to enhance the development of practice and improvement of services. Another review emphasised the need to strengthen the evidence base for IPE, requiring further rigorous mixed-method studies of IPE in order to provide better clarity on its mechanisms and its effects on PP and patient/client care (Reeves et al., 2010).

Healy (as cited in Gray, Field, & Brown, 2010) identifies that in the social service sector, "service provision and its management necessarily involves battling with dilemmas, ambiguity, conflicting interests, incompatible expectations and judgement calls where there are not options that can rationally be chosen as the 'best'" (p. 64). Similarly, Fook and Gardner (2007) identify that social work practitioners indicate the need to find ways to continually develop knowledge and practice that fit with this changing and complex context. They observe that professionals are finding their previous formal and informal training is not adequate in helping them manage current work environments. These practitioners suggest a need for competencies, skills and processes that enable them to engage with, and constructively manage, changing work environments and the issues these present (Fook & Gardner, 2007).

According to Sun and Scott (2003), learning and reflection is needed in complex professional situations. There are barriers in transferring learning to all levels in the organisation (i.e., individual, collective, organisational, and inter organisational). To respond to the growing challenges in workplaces not up-to-date with modern pedagogies, education programmes are needed so staff can bring academic skills to contemporary workplace issues.

From the perspective of individuals working in health and social service environments, Fook and Gardner (2007) note the common issues faced by those working in human service organisations are a sense of powerlessness linked to uncertainty, fear of risk, and increased complexity. They go on to state that the organisational responses to these issues tend to be focused on the parts as opposed to the whole, on outcomes, on pressure to work to rules and procedures. Such responses can cause professional practitioners stress – they may find their traditional discipline-specific work manageable, but struggle with the nature of the organisation they work within (Fook & Gardner, 2007).

Current research suggests that collaborative models of health and social service work best when professionals have experienced inter-professional education (IPE) within their professional programmes (Darlow et al., 2015). Inter-professional collaboration occurs when learners from two or more professions engage in learning with, from and about each other to improve collaboration and the delivery of care (Freeth et al., 2005). D'Amour and Oandasan (2005) have already stated that learning with, from and about each other leads to better understanding amongst providers and stakeholders, assists with recruitment of professionals and provides better outcomes for patients and clients. These authors have appealed for inter-professional education programmes and approaches that demonstrate innovation, integration, sharing and development.

## Identification of the need for research into the programme

The PP suite of programmes responds to the need to provide a curriculum structure to support professionals to not only to extend their knowledge but to open their inter-professional communication, examine their practice from an inter-professional perspective and refine their understandings of working with diverse peoples and communities. The identified need for acquisition of inter-professional skills within educational contexts, as well as the impact and effectiveness of IPE to related services and industries, also highlights the need for evaluation.

Research in IPE and IPP is currently in the early stages of development. Recent scholarly work undertaken by Buhler et al. (2016) has focused on inter-professional communication among first-year tertiary students from ten health profession programmes. Findings suggest there is a need for additional investigation into the impact of communication and feedback styles in inter-professional classrooms, as feedback has a profound effect on the success of inter-professional teams. They have also highlighted that communication styles predominant to particular

professions have the potential to reduce interpersonal tensions and increase team collaboration effectiveness with benefit to client outcomes.

Previous evaluation research conducted using pre- and post-surveys and reflective writing from students found that students working in inter-professional educational environments have their teamwork collaboration strengthened, and their attitude toward clients significantly changed (Jacomino et al., 2015). Emerging research in the field identifies the need for effective development of research projects. It also identifies the need for examination of links between the learning outcomes of inter-professional courses and the courses' impact on services and practices. The eventual effects (of inter-professional courses) on client outcomes should also be examined (West et al., 2015).

All elements of the PP suite of programmes have been designed to provide key tools for practising inter-professionally: critical thinking and analysis, research skills, evidence-based practice and practice-based evidence, academic writing, critical leadership, diversity management, policy analysis, and advancing reflective and reflexive PP.

No detailed research exists about the inter-professional needs of modern health and social service workers. For the Whitireia-WelTec Professional Practice suite of programmes to continue to support students and related industries in their professional practice, there is a need to identify what stakeholder needs and expectations are, and how the programme is addressing these needs. Consequently, the programme staff developed and implemented an evaluation of the PP suite of programmes, which is described in this paper.

## METHODOLOGY

## Epistemological paradigm

The methodology underpinning the research and informing the choice of methods and analysis is social constructionism, as informed by Berger (2000). This methodological stance understands that reality is constructed by individuals in the context of their world, and it is in keeping with the epistemological foundations of the programme (WelTec/Whitireia, 2016). Key to learning success is recognition that students bring with them a wealth of experience and understanding about their social world.

These understandings inform the wider epistemological assumptions and approaches of the research. As Payne (2014) argues, constructionism underlies theory development. From a position of constructionism, while the programmes are built around key themes, what happens in the interaction between the student and the material, and among the students in a blended learning context, needs to be investigated in situ and the findings are not intended to be applicable outside this context. Constructionism also accepts the position of the researcher in contributing to the meaning-making process (Lincoln, Lynham, & Guba, 2011). In this case, the researchers are also the programme teaching and management staff, each coming from their own specific discipline areas, as co-constructors of shared knowledge on the PP courses and programme outcomes. Therefore, the research methodology is underpinned by auto-ethnography, as methodology and method, through the ethnographic participation of the researchers.

Furthermore, in stage two of this study, involving interviews with employers and wider stakeholders, participants will be speaking about their own workplace needs and their observations of the impact of the programme on the PP of the students in their work environments. As social constructionism acknowledges, context is critical and understandings of the transfer of learning from the academic setting into the workplace is challenging to identify. It cannot be assumed that what is taught and what is learned in the learning environment is what is put into practice in the workplace. This research endeavours to understand, more deeply, how this process is happening for programme stakeholders. The study received ethical approval from the Whitireia/WelTec Ethics and Research Committee on August 28, 2017.

## Procedure

The study is being conducted in two stages. Currently underway is stage one, which involves content analysis of documentation related to the PP suite of programmes. These documents include a sample of student summative assessments, student online discussions, formal and informal student course and programme evaluations, and student reflection exercises.

Stage two involves focus groups of approximately one hour with six students and graduates of the PP programmes. Face-to-face individual semi-structured interviews with programme staff and stakeholders (employers of students/ graduates from the programme) will be held, taking 30-45 minutes each. All focus groups and interviews will be recorded with a digital recorder. The focus groups and interviews will be conducted by an independent facilitator at a neutral venue. Participants will be provided with petrol vouchers as an incentive to participate in the study. Interview questions are attached in Appendix A.

## Analysis

The research team will carry out the content analysis from stage one using a collective/group approach. The research team will meet together to analyse data, and to identify key themes and gaps. The content analysis will further inform the stage two interviews and focus groups. Since the students and graduates are professionals working in organisations, data produced from the interviews will be compared and contrasted with stakeholder data, particularly that of employers.

Qualitative content analysis and thematic analysis are two commonly-used approaches in data analysis. Content analysis is used for systematically describing written, spoken or visual communication. Content analysis is also used to analyse, to classify and categorise open-ended responses to interview or survey questions. This analysis will be theory-driven, utilising relevant research findings as a guide for initial codes. The research team will use the constructivist framework and theory from inter-professional practice and education. A summative content analysis involves counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context (Hsieh & Shannon, 2005).

Thematic analysis is defined by Braun and Clarke (2006) as a "method for identifying, analysing, and reporting patterns (themes) within data in (rich) detail. However, frequently it goes further than this, and interprets various aspects of the research topic" (p. 79). In this project, thematic analysis of interview data will be used in an inductive manner, by coding and theme development, within a constructivist theoretical framework.

Further examination of findings from stages one and two will be conducted to generate a deeper analysis. Based on these two types of content analysis and the thematic analysis, it is expected that trends and themes will be identified that will be useful towards evaluating the needs, effects, and impact of MPP curriculum to students' practices from the perspectives of different stakeholders. Findings of this research will contribute to evidence-based practice about professional experiences and the needs professional practitioners and their stakeholders have for development of their professional practice, from practitioner, employer and stakeholder perspectives. This information will add to programme development, to the wider body of knowledge in the field, and ultimately improve outcomes for students, employers, industry, clients, and for Whitireia and WelTec.

## CONCLUSION

The study is timely, as the programme sees its first graduates in early 2018. This study will increase understanding of student and stakeholder expectations in the workplace and the programme. Further, the study will assess what is needed to inform curricular and programme development. Evaluation findings will demonstrate programme effectiveness to the providing tertiary institutions, presenting a measure of programme performance, evidence of pedagogical strategies for inter-professional practice, and also to act as a source of feedback to industry partnerships

about the needs, effects and impacts of the programme.

While there is literature available about the changing needs of professional and inter-professional work environments in health and social services, practitioner, educator and employer voices are silent in the literature. This research will refine the skills graduates of the programme require to practise in their fast-changing inter-professional work environments. There is also little debate about how 'training to do' limits the space available for epistemologies of and for practice (Stanley & Kelly, 2010). This research aims to add to this debate. Future research can build on the findings of the current study by using a wider range of tertiary providers, comparing PP programmes and employing larger data sets.

The findings from this evaluation show the development of critical practice skills around the common themes of the programme: research and evidence-based practice, education, leadership, working with diversity and advancing critical reflection of professional identities and inter-professional practice for students of the programme.

## REFERENCES

Berger, P. L. (2000). Reflections on the 25th anniversary of the social construction of reality. *Journal of Management Inquiry*, *9*(3), 274. Retrieved from https://search-proquest-com.whitireia.idm.oclc.org/docview/203322141?accountid=180369

Bourdieu, P. (2005). Habitus. In J. Hillier & E. Rooksby (Eds.), *Habitus: A sense of place* (pp. 46-52). Farnham, UK: Ashgate.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Buhler A. V., Coplen, A. E., Davis. S., & Nijjar, B. (2016). Comparison of communications styles amongst an inter-professional student cohort: How do our students communicate with other health care providers? *Journal of Research in Inter-professional Practice and Education*, *6*(2), 1-14.

D'Amour, D., & Oandasan, I. (2005). Inter-professionality as the field of inter-professional practice and inter-professional education: An emerging concept. *Journal of Inter-professional Care*, *9*(1), 8-20.

Darlow, B., Coleman,P., McKinlay, E., Donovan, S., Beckingsale, L., Neser., B. … & Pullon, S. (2015).The positive impact of interprofessional education: A controlled trial to evaluate a programme for health professional students. *BMC Medical Education*, *15*(98), 6-7.

Fook, J., & Gardner, F. (2007). *Practising critical reflection: A resource handbook.* Maidenhead, UK: McGraw-Hill Education.

Freeth, D., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2005). *Effective inter-professional education: Development, delivery and evaluation.* Oxford, UK: Blackwell.

Gray, I., Field, R., & Brown, K. (2010). *Effective leadership, management and supervision in health and social care* (1st ed.). Exeter, UK: Learning Matters.

Hammick. M., Freeth. D., Koppel. I., Reeves. S., & Barr. H. (2007). A best evidence systematic review of interprofessional education. *Med Teach*, *29* (8), 735-51.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288.

Jacomino, M., Bamdas, J. A., Keller, K., Hamlin, E., Hawkins, M., Gordon, S., & Ouslander, J. (2015). An innovative inter-professional education program for university medical, nursing, and social work students learning in teams during sessions and visits with geriatric mentors. *Journal of Inter-professional Education & Practice*, *1*(3), 100-103. Retrieved from http://dx.doi.org/10.1016/j.xjep.2015.10.003

Kannampallil, T. G., Schauer, G. F., Cohen, T., & Patel, V. L. (2011). Considering complexity in healthcare systems. *Journal of Biomedical Informatics*, *44*(6), 943-947.

Leckie, G. (2011). Western guide to professional master's programs. London, Canada: University of Western Ontario.

Lincoln Y. S., Lynham S. A., & Guba E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. *The Sage Handbook of qualitative research*, 4, 97-128.

Payne, M. (2014). *Modern social work theory* (4thed.). Basingstoke, UK: Palgrave Macmillan.

Reeves. S., Zwarenstein, M., Goldman. J., Barr. H., Freeth. D., Koppel. I., & Hammick. M. (2010) Establishing a systematic approach to evaluating the effectiveness of interprofessional education. *Issues in Interdisciplinary Care*, *3*(1), 41-49.

Stanley, T., & Kelly, S. (2010). Weaving sociology into New Zealand social work education. *Social Work Education*, *29*(6), 683-694.

Sun, P. Y., & Scott, J. L. (2003). Exploring the divide: Organizational learning and learning organization. *The Learning Organization*, *10*(4), 202-215.

Tope, R., & Thomas, E. (2007). *Health and social care policy and the interprofessional agenda.* Fareham, UK: Centre for the Advancement of Interprofessional Education. Retrieved from: http://caipe.org.uk/silo/files/cipw-policy.pdf

WelTec & Whitireia. (2016). *Programme document: Masters of Professional Practice*. Wellington, New Zealand: WelTec and Whitireia. Retrieved from http://atea/academic/SitePages/Programmes%20and%20Courses.aspx

West, C., Veronin, M., Landry, K., Watzak, B., Quiran, B., & Graham, L. (2015). Tools to investigate how inter-professional education activities link to competencies. *Medical Education Online, 20,* 28627.

World Health Organisation. (2010). *Framework for action on interprofessional education and collaborative practice.* Geneva, Switzerland: World Health Organisation.

## APPENDIX A: INTERVIEW SCHEDULE

### Students and graduates

1. What are/were your expectations for the MPP programme?

2. What do/did you need from the programme?

3. Can you identify any changes in your professional practice or your own work environment since you began studying in the programme? If so, please tell us about these.

4. Have there been/Were there any issues, for you in the programme? If so, can you tell us about these?

5. What do you feel has been the biggest impact of the programme for you? Personally? Professionally?

6. Do you have any suggestions for programme improvement?

### Programme staff

1. What are/were your expectations for the programme?

2. From your experience/observations, what do you see as:
   The biggest impact of the programme for students?
   The common experiences/themes for students?
   The challenges for students?

3. What is the impact of the programme on your own professional practice?

4. Do you have any suggestions for programme improvement?

### Employers

1. What are/were your expectations for the MPP programme? For you as an employer and for your employee(s) in the programme?

2. What do you need from the programme in terms of what it can offer for your employee?

3. Can you identify any changes in the professional practice of your employee or the work environment since the student began studying in the programme? If so, please tell us about these.

4.  Have there been issues for you as an employer as a result of the programme? If so, please tell us about these.

5.  What do you feel has been the biggest impact of the programme for the work environment? (Possible prompts: changes to employee's practice habits; changes to the immediate work environment; changes to professional relationships.)

6.  Do you have any suggestions for MPP programme improvement?

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# PLACE-RESPONSIVE EDUCATION

# A CASE STUDY OF AN EXTENDED ENVIRONMENTAL SCIENCE JOURNEY

IVOR HEIJNEN

# ABSTRACT

The role of place in teaching and learning is currently receiving increased attention in tertiary education. A focus on place allows educators to engage students in understanding how humans live in, experience, and relate to particular locations on earth. Place-responsive pedagogies recognise that the histories and physical characteristics of a place are central to the learning experience, and can support students in developing relationships with the natural world. Understanding human-nature relationships[1] is becoming increasingly important, given the wide range of socio-environmental issues affecting the planet.

This article explores place-responsive education theory and practice through the use of a case study. Second year students on the Bachelor of Sustainability and Outdoor Education at Ara Institute of Canterbury complete a ten-day journey across Harper Pass in Arthur's Pass National Park. During this journey, students explore concepts relating to environmental science, place, and human-nature relationships through peer presentations, journaling, and informal and formal teaching sessions. The article discusses the role of human-nature relationships and place in this tertiary education course, and uses excerpts from students' reflective journals to support this discussion.

# INTRODUCTION

One of the main aims of any tertiary education programme is to prepare students to live and work in a complex and fast-changing globalised society (Tertiary Education Commission, 2016). It is well established that humans have changed the planet's ecosystems significantly over the last 60 years to meet the resource demands of a growing and wealthier population (Millennium Ecosystem Assessment [MEA], 2005). Although these changes have resulted in increases in human wellbeing and economic development, there is now ample evidence to suggest that the increasing demand on natural resources has caused significant environmental degradation highlighted by the mass loss of biodiversity and anthropogenic climate change (Hill, 2012; Irwin, 2010; International Panel on Climate Change [IPCC], 2014; MEA, 2005). These changes are so significant that scientists now question the continued ability of our planet to sustain future generations (MEA, 2005; Rockström et al., 2009; Steffen et al., 2015). It seems clear, therefore, that more focus should be placed on developing tertiary education programmes that support sustainable ways of living.

One of the causes of the issues described above is that "too many of us seem to have disconnected ourselves from nature and forgotten that our economies and societies are fundamentally integrated with the planet" (Stockholm Resilience Centre, 2017, para. 2). But what does this mean in the context of developing educational programmes that are place-responsive? How can education support the mending of this human-nature disconnect? Place-responsive education seeks to connect learners to local environments through a variety of strategies that increase environmental awareness and attachments to particular parts of the world (Sobel, 2004). Hutson (2010) argues that the concept of place connects people to localities through personal and social meaning-making. Place-responsive education, therefore, has as its core principle the aim to be sensitive to the needs of local people, other organisms, and the unique characteristics of these places (Hutson, 2010; Orr, 1992).

This article examines a tertiary education course that enables students to understand, and develop connections to, the social and environmental contexts of the Harper Pass area. The article uses reflective comments made by students

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1   When the term 'human-nature' is used in this article it refers to a relationship between humans and nature, the hyphen indicating a link between two elements, and so is different from 'human nature' in the sociological or psychological sense.

in their field journals to support its discussion. Written consent to use their comments was given by all students, and to ensure anonymity pseudonyms are used throughout this article.

The following section contains a brief description of the course on which this article is based. A discussion of relevant literature on the role of place in developing human-nature relationships is then provided. Finally, the article discusses the pedagogical foundations of the course, and how it aims to maximise student learning in this developing area.

## THE JOURNEY ACROSS HARPER PASS

In the second year of the Bachelor of Sustainability and Outdoor Education at Ara Institute of Canterbury, students complete the compulsory course Environmental Science 2: Field Application. The course aims to develop students' ability to integrate ecological knowledge into outdoor education experiences (Heijnen, 2017). The key learning outcomes of this course are to: investigate the ecology of an area in Aotearoa New Zealand and relate the information to others; integrate scientific, cultural and environmental knowledge into outdoor learning experiences; synthesise and evaluate arguments relating to human-nature relationships; and record ecological observations and critically reflect on them.

Students and staff often refer to the course as 'the journey', as most of the delivery occurs during a ten-day field trip across Harper Pass in Arthur's Pass National Park. Walkers would normally take four days for this route, however the journey takes ten days as the aim is for students to immerse themselves in this environment while they make their way up the Taramakau River, over Harper Pass, and down the Hurunui and Hope Rivers (see Figure 1). Jo Straker, who originally designed the journey and taught the course for ten years, explains the reason for slowing the pace:

> Movement along the track encourages a style of outdoor learning which is physically engaging, yet allows time for reflection, questions, and lively debate. These opportunities for shared, contextual, and relational experiences focus on appreciating not only where we are, but how that influences ways of knowing. (Straker, 2012, p. 170)

The journey takes students across the main divide of the Southern Alps and through a wide range of forests, braided rivers, lakes and sub-alpine environments. Students sleep in tents, improvised shelters, and historical backcountry huts, and cook on fires or stoves. We camp several nights on the shores of Lake Kaurapataka where kiwi are often heard, and the dawn chorus allows students to learn the differences between the calls of tui and korimako, pīwakawaka and riroriro. Wet weather, river crossings, abundant sandflies, and the lack of phone coverage can make learning a challenge for students – they have no choice but to fully engage in the environment.

One of the reasons for using the Harper Pass route is its extensive Māori and European history. It was the preferred way for Māori to cross the Southern Alps to collect pounamu as the route's swamps and rivers had abundant food sources (McDonald, 2011). Later, after Leonard Harper became the first European to cross the pass, the gold rush of 1854 saw its use greatly increased and many people died on the route due to drowning and exposure (Barnett, n.d.). The gold rush also stimulated construction of a road over Arthur's Pass, and the number of people using the Harper Pass route declined. In recent years the route has become increasingly popular with walkers as it now forms part of Te Araroa, the long-distance hiking route from Cape Reinga to Bluff (Te Araroa, 2017).

As part of the course, students prepare and deliver a 30-minute presentation to their peers on a topic related to the Harper Pass area. These topics range from alpine flora, the Hope Fault and landscape processes, to ferns, fungi, fresh water issues in Canterbury, and the Māori and European history of Noti Taramakau (Harper Pass). Presentations are delivered during the journey in a suitable location and students are expected to use the location in their presentation as a context for learning. The presentations enable students to engage in depth with a wide range of socio-environmental topics and explore their interrelationships as the journey unfolds. Further discussions serve to deepen students' understanding of the topic at hand, as well as to enable them to draw connections between topics where possible. As such, the student presentations form the connecting thread of the journey. Students are also encouraged on several occasions to engage in a reflective solo. This means that they separate themselves from the group and
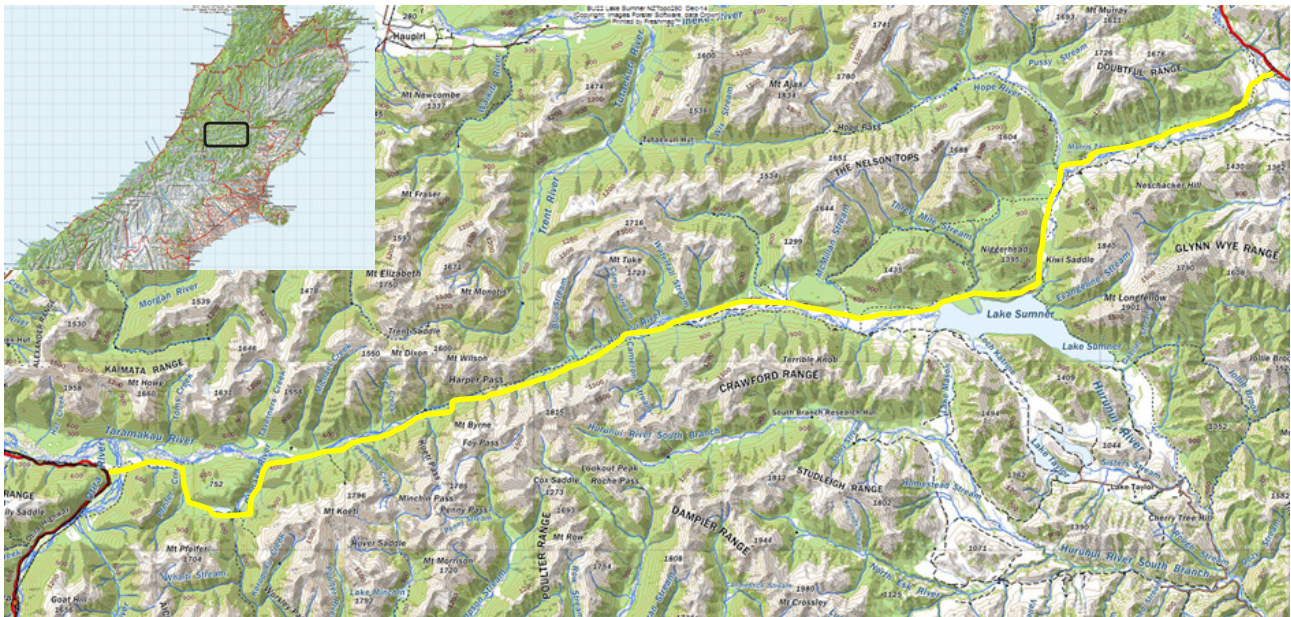
Figure 1: Map of 'the journey'. Travel direction is from west to east. Route is shown in yellow. (Source: Heijnen, 2017, adapted from Freshmap)

spend between one and two hours alone in a place of their choosing, such as the forest, or next to a river or lake. During these solo sessions students are asked to closely observe their surroundings using a range of senses. It is often during these experiences, away from the distractions of the social group, that students begin to closely observe, and form relationships with, the environments around them.

Students keep a field journal during the journey which includes flora and fauna descriptions, ecological observations, presentation notes, reflection notes, and a range of artistic expressions. In their journal students critically reflect on their experiences during the journey and how these are related to their everyday lives. Together, these assessments support students in developing an understanding of the relationships between environmental systems and processes, urban and outdoor places, and associated socio-environmental issues discussed in the introduction. What follows next is a discussion of the concepts of human-nature relationships and place, and how student experiences during the journey relate to these concepts.

## HUMAN-NATURE RELATIONSHIPS AND PLACE

There are a range of philosophical issues with regard to human-nature relationships. Definitions of what 'nature' is are contested, and the concept has a range of conflicting meanings for people (Ginn & Demeritt, 2009). The dichotomy between humans and nature is both false and a cause of many of the socio-environmental problems discussed in the introduction (Lugg, 2007; Higgins, 2009; Hill, 2011; Irwin, 2012; Martin, 1999; 2004). Payne and Wattchow (2008) argue that even when we accept that it is important to develop students' connections to natural environments, it remains difficult to clearly describe what such relationships look like and how they are formed.

The concept of place offers a pathway towards understanding human-nature relationships. Place is a way to understand how humans live in, experience, and relate to particular locations on earth (Brown, 2008; Wattchow, 2005; Wattchow & Brown, 2011), as place is "generally conceived as being 'space' imbued with meaning" (Vanclay, 2008, p. 3). This means that place refers to the invested meanings that people have in relation to physical locations. Locations as different as a city, a secluded farm house, or a forest campsite can be considered as place, as all are centres of meaning – realities that are both individually perceived and socially constructed by people (Hutchinson, 2004; Massey, 1994; Tuan, 1974).

The physical environment also plays an important role, as our sense of place is constructed in the context of the physical setting and its unique characteristics. Pyle (1993) argues that connections between people and the natural world occur in specific places, and that people who care strongly about the outdoors do so as a result of connections to particular outdoor environments. In his journal, John, a student completing the journey in 2017, describes how the journey supported him in developing a sense of care for natural areas:

> Before I went on journey I always had an appreciation for nature, yet I never had a relationship to it. The definition of a relationship for me means to have a sense of belonging and love. There were some main experiences which helped form this relationship, these were the silent moments spent on solo, observing the huge mature beech trees along the tramp and learning about the vast amount of species around me .

John uses the word 'relationship' as opposed to 'appreciation' to explain his evolving connections with nature, which signals a potentially deepening sense of care. Laura, another student, who completed the journey in 2017, writes about developing a sense of place by engaging her curiosity about outdoor places:

> Creating connections between environmental science and the outdoors as an educator nurtures and guides me and others to explore nature in ways that can create a curiosity towards the outdoors and a sense of place. This way of teaching allows people to discover the world around them so that they can see the value in nature, and what it can provide both emotionally and physically.

Laura is describing how exploration of outdoor places can support the development of an attachment to place. The term 'place attachment' refers to the range of positive feelings about a place that a person can experience (Vaske & Kobrin, 2001). 'Place familiarity' is the extent to which a person has knowledge of a certain place and is often used as a measurement of place attachment (Convery, Corsane, & Davis, 2012; Wattchow, 2001). The journey gives students time to develop knowledge of, and attachment to, the Harper Pass area. Knowledge is gained in a holistic way: kinaesthetically, emotionally and intellectually. Through a combination of walking, discussions with other students, presentations, teaching sessions, and time spent away from the group, students slowly develop a sense of place with regards to the Harper Pass area. Bella writes about the multiple ways in which she developed an attachment to place in her journal:

> On the morning of the first day I made an agreement with myself to be as positive as I can even if I get cold or tired. I tried to make every moment last and fully engage with the environment around me. The main thing I will take away from this journey is the value and importance of observation. The ability to look or experience something and think and ask why is it the way it is? Journey was an amazing experience which gave me a new outlook on life.

People are able to develop positive connections to place in a number of ways. One of the early writers on the concept of place, Relph (1976), argues that the difference between being a local, rather than a stranger or visitor to a place, is critical in becoming attached to that place. He suggests that long-term residency, insider status, and local ancestry are important elements in establishing a strong sense of place. For Tuan (1974), an attachment to place is developed most powerfully through repeated physical exposure to particular settings. Yet, as Ardoin (2006) argues, in today's increasingly transient world, with its high levels of mobility in terms of where people live, work and recreate, many people are becoming less rooted to particular places. Students on the journey are most definitely visitors to the Harper Pass area, not residents. In addition, many of the socio-environmental issues that were described in the introduction, also play out on a global scale (Higgins, 2009; 1997; Higgins & Nicol, 2002). Therefore, place-responsive education may be most effective when it recognises the potential diversity of place attachments that can stem from a range of relationships with place, including familial, spiritual, economic, and recreational, among others (Low & Altman, 1992).

> Straker (2014) and Martin (2004) argue that developing an attachment to place through outdoor education journeys requires both a significant amount of time, as well as ongoing positive experiences. It is also important that students feel comfortable, emotionally and physically safe, and confident in their ability to be self-sufficient in outdoor places, in order for enduring relationships to develop. Joan writes about this in her journal:

Before I began journey, I was nervous at the idea of carrying ten days' worth of equipment and having to be around

the same people for a long amount of time. After a few days of the trip, I became a lot more relaxed and settled within the environment and began to notice new things around me. By the end of the trip, I was enjoying every minute the journey had to offer, I was analysing the environment around me more and more and became very intrigued to learn more about it, and I was also still enjoying being around the same people.

Place-responsive journeys enable students to explore the interdependence of socio-environmental systems and places, and show connections between the local and the remote, the outdoor and the urban, the human and natural world they inhabit (Straker, 2012). Jason writes about this in his journal:

> I have also come to realise if humans are going to have any hope at managing climate change […] then we need to understand the environment better. What better way to do that than a slow journey such as ours where we were able connect with the environment in multiple different ways. Solo was amazing as it heightened our senses through being silent and still in one place. River crossings, sunshine, rain, rocks and hot pools stimulated our physical senses allowing us to further understand the environment.

Jason makes an explicit connection between his learning experiences during the journey and the more abstract global issue of climate change. He describes the multi-faceted development of sense of place and how this supports his understanding of environmental issues. Jason also looks forward to his future as an outdoor educator and comments how his learning experiences during the journey have influenced his future teaching practice:

> These are some of the key points which I learnt make up a good classroom to teach about the environment, and I will strive to adopt them into my teaching as an outdoor educator where I can.

Such explicit reflections show the potential impact that place-responsive education can have. The following section discusses the pedagogical foundations of the journey through the lens of two contemporary educational theories: constructive alignment (Biggs, 1996), and Phil Race's model of critical factors underpinning learning (2014).

## PEDAGOGICAL FOUNDATIONS OF THE JOURNEY

The concept of constructive alignment is gaining significant ground in tertiary education, and can be understood as aligning course assessments, learner activities and teacher support with its learning outcomes, whilst keeping the learner's needs central throughout the design and delivery (Biggs, 1996). The journey aims to integrate and align each of the elements of the course described above. As discussed previously, the journey has four key learning outcomes: to investigate the ecology of an area in Aotearoa New Zealand and relate the information to others; integrate scientific, cultural and environmental knowledge into outdoor learning experiences; synthesise and evaluate arguments relating to human-nature relationships; and record ecological observations and critically reflect on them.

The course assessments are designed to support the learning outcomes described above. The presentation assessment enables students to research and share in-depth knowledge on a topic relevant to the Harper Pass area, and develop an understanding that each topic is linked to many other parts of the socio-ecological systems encountered there. The second course assessment is a learning journal. Journaling encourages students to slow down, make accurate ecological observations and ask thought-provoking and reflective questions (Hubbs & Brand, 2005). Anna expresses this important element of the journey in her reflection:

> Once I started asking more 'how' and 'why' questions rather than only asking what the plant was called, I found I developed a deeper curiosity and interest for the plants. I also wasn't really thinking for myself as I would frequently ask [the tutor] for the answers. I learnt a lot more when I started to make my own ecological observations and ask questions like "how has that plant evolved to adapt better to the environment" or "why does a plant live where it does." It [journaling] also helped me understand the role that plants, birds and other species play in the ecosystem. After watching all the presentations, it gave me the realisation that everything is connected.

Students also complete a 1500-word review of literature relating to human-nature relationships, a month after the journey. During the journey there are structured reading and discussion sessions which cover key readings on this topic. The learning outcomes, assessments and learning activities are thus aligned. However, there is more to the journey then the intellectual practices of reading, writing and discussing. Being in the mountains for ten days allows students to learn in a multitude of ways, as Lucas explains in his journal:

> Having ten days in the bush had a large effect on my wellbeing in a positive way. I started to feel so much more relaxed outdoors. I felt comfortable being away and around the 6th or 7th day I was used to it and started to accept the nomadic life of tenting, eating, hiking, exploring, connecting. I feel like in time I want to do longer trips with the same goal, to connect, to explore, to reflect, examine organisms and ecosystems and see change in environments I walk through and understand why they are like that.

The reflections of Lucas and Anna highlight the importance of the concept of place-responsive educational programmes in aligned teaching and learning pedagogy. Phil Race (2014) argues that successful learning is underpinned by six factors. A brief discussion of each factor and how the journey addresses it follows. The first factor represents the motivation of the student for the learning task. Race states that students either must *want* to learn or clearly understand the *need* to learn something. Jason's experience described above is common. Students on the journey are encouraged to take time to explore concepts or settings that have meaning for them specifically. Tutors also emphasise how the experiences of the journey are related to students' development as professional outdoor educators.

Race also discusses the importance of the 'doing' and 'making sense', the second and third factors of learning. The journey allows students to develop a personal relationship to the Harper Pass area through a range of learning experiences. When students learn about lichen and mosses for example, they are encouraged to look, smell, and touch these organisms, identify specific species, and gain further understanding of their pivotal role in a variety of ecosystems and processes through reading books, and through student presentations and discussions.

Students are encouraged to 'verbalise' their learning, and gain 'feedback', the fourth and fifth factors discussed by Race, on an ongoing basis. Examples of this are conversations between students and tutors as we walk along the track or at campsites. Formative feedback is provided by tutors on students' journal entries during the first few days of the journey, and students get feedback on their presentations from their peers as well as from tutors. Race's sixth learning factor is 'assessment'. Students get verbal and written feedback about their presentations soon after giving them. Tutors and a small group of students mark the presentations on a rotational basis. Each student therefore is able to provide feedback about some peer presentations. These discussions between student markers, presenters and tutors often provide wonderfully rich learning experiences for all involved.

## CONCLUSION

It is clear that understanding human-nature relationships has become increasingly important given the wide range of socio-environmental issues affecting the world. By being immersed in a ten-day journey through the mountains of the Harper Pass area, students have a range of significant learning experiences. They develop in-depth connections to place, and an understanding about how specific socio-environmental issues impact on their everyday lives and future practice as outdoor educators.

This article argues that the concept of place is important for outdoor educators. Place-responsive educational journeys should be aligned with other components of the study programme. Educators should enable students to create connections to place in meaningful ways. Connections between the outdoor places students visit and the urban places they often live in need to be made explicit, as should the interdependence between local and global socio-environmental problems and their potential solutions. And, finally, students should be encouraged to ask meaningful and critical questions related to their learning experiences throughout their journey.

If the main aim of any tertiary education programme is to prepare students to live and work in a complex and fast-changing global society, a society which urgently needs to address a range of socio-environmental problems, then developing educational programmes and approaches that support students in connecting to the natural world is of critical importance. This article concludes that place-responsive education in general, and outdoor education journeys in particular, are an effective way to achieve this.

## REFERENCES

Ardoin, N. M. (2006). Toward an interdisciplinary understanding of place: Lessons for environmental education. *Canadian Journal of Environmental Education*, *11*(1), 112-126.

Barnett, S. (n.d). Harper Pass. Retrieved from https://www.nzgeo.com/stories/harper-pass/

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

Brown, M. (2008). Outdoor education: Opportunities provided by a place based approach. *New Zealand Journal of Outdoor Education*, *2*(3), 7-25.

Convery, I., Corsane, G., & Davis, P. (2012). Introduction: Making sense of place. In I. Convery, G. Corsane & P. Davis (Eds.), *Making sense of place: Multidisciplinary perspectives* (pp. 1-8). Woodbridge, UK: Boydell.

Ginn, F., & D. Demeritt. (2009). Nature: A contested concept. In N. Clifford, S. Holloway, S. P. Rice, and G. Valentine (Eds.), *Key Concepts in Geography* (pp. 300-311). London, UK: Sage.

Heijnen, I. (2017). Environmental Science 2: Field Application (Course Outline). Retrieved from Ara Sustainability and Outdoor Education Programmes Moodle page http://moodle.ara.ac.nz/mod/folder/view.php?id=311565

Hill, A. (2011). *Re-envisioning the status quo: Developing sustainable approaches to outdoor education in Aotearoa New Zealand.* (Doctoral dissertation). University of Otago, Dunedin, New Zealand). Retrieved from https://ourarchive.otago.ac.nz/bitstream/handle/10523/1954/HillAllenM2011PhD.pdf?sequence=1&isAllowed=y

Hill, A. (2012). Developing approaches to outdoor education that promote sustainability education. *Journal of Outdoor and Environmental Education*, 16(1), 15-27.

Higgins, P. (1997). Outdoor education for sustainability: Making connections. *Journal of Adventure Education and Outdoor Leadership*, *13*(3), 4-11.

Higgins, P., & Nicol, R. (2002). Outdoor learning in theory and practice. In P. Higgins, & R. Nicol (Eds.), *Outdoor education: Authentic learning in the context of landscapes* (2nd ed.) (pp. 3-14). Kisa, Sweden: Kisa-Tryckeriet.

Higgins, P. (2009). Into the big wide world: Sustainable experiential education for the 21st Century. *Journal of Experiential Education*, *32*(1), 44-60.

Hubbs, D. L., & Brand, C. F. (2005). The paper mirror: Understanding reflective journaling. *Journal of Experiential Education*, *28*(1), 60-71.

Hutchison, D. C. (2004). *A natural history of place in education* (Vol. 24). New York: Teachers College Press.

Hutson, G. (2010). Remembering the roots of place meanings for place-based outdoor education. *Pathways: The Ontario Journal of Outdoor Education*, *23*(3), 19-25.

International Panel on Climate Change (IPCC). (2014). *Climate change 2014: Synthesis report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate*. Geneva, Switzerland: IPCC.

Irwin, D. B. (2010). *Weaving the threads of education for sustainability and outdoor education*. (Doctoral dissertation). University of Canterbury, Christchurch, New Zealand. Retrieved from http://ir.canterbury.ac.nz/bitstream/10092/3637/1/thesis_fulltext.pdf

Irwin, D. B. (2012). Constructing a sustainability identity through student action projects. In D. B. Irwin, J. Straker, & A. Hill (Eds.), *Outdoor education in Aotearoa New Zealand: A new vision for the 21st Century* (pp. 151-167). Christchurch, New Zealand: CPIT.

Low, S. M., & Altman, I. (1992). Place attachment: A conceptual inquiry. In I. Altman & S. M. Low (Eds.), *Place attachment* (pp. 1-12). New York: Plenum.

Lugg, A. (2007). Developing sustainability-literate citizens through outdoor learning: Possibilities for outdoor education in higher education. *Journal of Adventure Education and Outdoor Learning*, *7*(2), 97-112.

Martin, P. (2004). Outdoor adventure in promoting relationships with nature. *Australian Journal of Outdoor Education*, *8*(1), 20-28.

Martin, P. (1999). Critical outdoor education and nature as friend. In J. C. Miles, & S. Priest (Eds.), *Adventure programming* (pp. 463-471). State College, PA: Venture.

Massey, D. (1994). *Space, place, and gender.* Minneapolis, MN: University of Minnesota Press.

McDonald, P. (2011). *Foot-tracks in New Zealand: Origins, access issues and recent developments*. Dunedin, New Zealand: Pete McDonald. Retrieved from http://homepages.vodafone.co.nz/~pete.mcd/ft/ft.pdf

Millennium Ecosystem Assessment (MEA). (2005). *Ecosystems and human well-being: Synthesis*. Washington, DC: Island Press.

Orr, D. W. (1992). *Ecological literacy: Education and the transition to a postmodern world*. Albany, NY: State University Press.

Payne, P. G., & Wattchow, B. (2008). Slow pedagogy and placing education in post-traditional outdoor education. *Journal of Outdoor and Environmental Education*, 12(1), 25-38.

Pyle, R. M. (1993). *The thunder tree: Lessons from an urban wildland.* Boston, MA: Houghton Mifflin.

Race, P. (2014). *The lecturer's toolkit: A practical guide to assessment, learning and teaching*. New York: Routledge.

Relph, E. (1976). *Place and placelessness* (Vol. 1). London, UK: Pion.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., … & Nykvist, B. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472-475.

Sobel, D. (2004). *Place-based education: Connecting classrooms and communities*. Great Barrington, MA: Orion Society.

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., … & Folke, C. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, *347*(6223), 1259855. Retrieved from http://tratarde.org/wp-content/uploads/2011/10/Science-2015-Steffen-PLANETARY-BOUNDARIES.pdf

Stockholm Resilience Centre. (2017). What is resilience? Retrieved from http://www.stockholmresilience.org/research/research-news/2015-02-19-what-is-resilience.html

Straker, J. (2014). *Meanings of 'the outdoors': Shaping outdoor education in Aotearoa New Zealand*. (Doctoral dissertation). Waikato University, Hamilton, New Zealand. Retrieved from http://researchcommons.waikato.ac.nz/bitstream/handle/10289/8660/thesis.pdf?sequence=3

Straker, J. (2012). Harper Pass: A slow journey across the Southern Alps. In D. Irwin, J. Straker, & A. Hill (Eds.), *Aotearoa New Zealand: A new vision for the 21st Century* (pp. 168-186). Christchurch, New Zealand: CPIT.

Te Araroa. (2017). Canterbury: Boyle to Arthur's Pass. Retrieved from https://www.teararoa.org.nz/canterbury/boyle-arthurs-pass/

Tertiary Education Commission. (2016). *The Tertiary Education Strategy 2014-2019*. Wellington, New Zealand: TEC. Retrieved from http://www.tec.govt.nz/focus/our-focus/tes/

Tuan, Y. F. (1974). *Topophilia*: *A study of environmental perception, attitudes, and values.* Englewood Cliffs, NJ: Prentice-Hall.

Vanclay, F. (2008). Place matters. In F. Vanclay, M. Higgins, & A. Blackshaw (Eds.), *Making sense of place: Exploring the concepts and expressions of place through different senses and lenses* (pp. 3-11). Canberra, Australia: National Museum of Australia Press.

Vaske, J., & Kobrin, K. C. (2001). Place attachment and environmentally responsible behaviour. *The Journal of Environmental Education*, *34*(4), 16-21.

Wattchow, B. (2005). 'Belonging to proper country': Australian outdoor education as experiencing relationships in place. In T. J. Dickson, T. Gray, & B. Hayllar (Eds), *Outdoor and experiential learning: Views from the top* (pp. 13-27). Dunedin, New Zealand: Otago University Press.

Wattchow, B. (2001, January). Outdoor education as the experience of place. In *Education outdoors: Our sense of place,* 12th National Outdoor Education Conference Proceedings (pp. 127-147). Bendigo, Australia: Victorian Outdoor Education Association.

Wattchow, B., & Brown, M. (2011). *A pedagogy of place: Outdoor education for a changing world.* Clayton, Australia: Monash University Publishing.

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# A MODEL FOR SUCCESS

# CHINESE STUDENTS STUDYING IN A TERTIARY INSTITUTION IN NEW ZEALAND, USING A CASE STUDY FROM OTAGO POLYTECHNIC
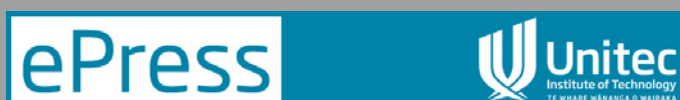
SHARLEEN HOWISON

XIAOLAN (SANDY) ZHOU

## ABSTRACT

The number of Chinese international students studying in New Zealand is increasing annually. Tertiary institutions in New Zealand are committed to providing a quality experience and assisting international students in receiving the best possible education. Multiple elements contribute to the success of these students and this study focuses on several factors including learning environment, language and cross-cultural communication.

An online survey was distributed to Chinese international students at Otago Polytechnic in 2016. The purpose of this survey was to investigate the experience of students in order to develop a successful tertiary learning model. The findings from the survey suggest that a successful model does not have a singular focus, but is multi-faceted, interactive and holistic.

Future research into larger Chinese student cohorts is suggested, including extending the study to a number of different tertiary education institutions in New Zealand and overseas.

## INTRODUCTION

According to New Zealand Education (2016), China is New Zealand's largest source country for international students, and to the end of June 2016 there were 33,425 Chinese international students studying at New Zealand institutions.[1] The proportion of total international student enrolments at New Zealand universities and polytechnics for this period that were Chinese, was 33% and 34% respectively. These figures demonstrate a large number of Chinese international students are engaging in tertiary study in New Zealand. Their success, as with all students, is important to the institute's vision, as indicated by Otago Polytechnic's public statement, which claims "Otago Polytechnic is proud to be a leader in hands-on, career-focused education, achieving some of the best student achievement and satisfaction results in Australasia" (Otago Polytechnic, 2016).

This research, which aims to explore what factors are integral to a successful model for Chinese students at a New Zealand tertiary institution, is closely aligned with Otago Polytechnic's overall emphasis on ensuring optimal outcomes for all students.

## LITERATURE REVIEW

This literature review relates to the development of a successful tertiary learning model for Chinese students studying abroad.

### Learning experiences

Hammond and Gao (2002) argue that contemporary Chinese education is classified as "memorization, rote learning and repetition" (p. 296). Similarly, Lee, Farruggia and Brown (2013) also consider it likely that Asian students spend more time on memorisation and less time on understanding texts. They argue that East Asia's education is more examination-oriented, indicating that all teaching and studying revolves around examination assessment. Because the East Asian education system emphasises reproducing knowledge through examination, teachers are likely to ask students to memorise concepts from textbooks in order to demonstrate understanding (Lee et al., 2013). These

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1    This 2016 number was up by over 3000 students from 2014.

scholars suggest that Asian students' academic writing is generally more focused on repeating the words of other authors, as opposed to critiquing different opinions, generating new ideas or drawing conclusions (Lee et al., 2013).

In addition, there are differences in pedagogical approaches between the East and West hemispheres: the Chinese system is teacher-centred, content-based and text-driven (Zhang, P., 2016), but the New Zealand education system has an increasingly student-centred approach. Chinese students are used to receiving knowledge from their teacher, accepting what they say in lectures and learning additional information from textbooks. Zhang, Y . (2016) describes Chinese students as hard-working but passive learners, obedient towards authority figures and also scared of expressing different ideas to teachers. Guan and Jones (2012) state that Chinese students are not used to debating and discussing ideas directly with their teachers. In contrast, the Western education system is more student-oriented, with teachers guiding students into building closer student-student relationships through interactive classroom tasks. In this Western context, independence is encouraged, as is critical thinking and a strong teamwork ethic, all of which differ from the Chinese education system (Guan & Jones, 2012).

## Language difficulties

The English language is essential to all international students when they are studying and living in an English-speaking country (Lee, Farruggia, & Brown, 2013). Qian and Zheng (2012) state that language difficulties produce problems for all international students, and Zhang, Y . (2016) regards language barriers as the greatest challenge for non-native English speakers. Likewise, Martirosyan, Hwang and Wanjohi (2015) believe that English proficiency plays an essential role in international students completing studies at an English-medium institution.

Language difficulties are common problems faced by many international students in New Zealand (New Zealand Education, 2016). Most international students from Asian countries are familiar with American English but are not used to the New Zealand accent (Lee et al., 2013). Many researchers confirm that language difficulties can decrease international students' self-confidence and this can affect academic performance (Zhang, Y., 2016; Gebhard, 2012). Martirosyan, et al. (2015) suggest that international students, particularly from non-English speaking countries, may have difficulty understanding lecture content and communicating with lecturers, because of language barriers.

In China, there is more emphasis on written English, as English teachers in China generally use textbooks for teaching vocabulary and grammar. Resultantly, the students have more opportunity to practice their written English rather than their spoken English, leading to weaker oral English skills. Jepson et al. (cited in Guan & Jones, 2012) argue that both speaking and writing in English is a challenge for many Chinese students.

## Cross-cultural communication

In addition to problems with English language proficiency, Holmes (2009) found that Chinese and New Zealand students may misunderstand each other when they have verbal and non-verbal interactions in class. The difference in education systems between China and Western countries highlights some interesting issues regarding cross-cultural communication; Holmes notes that Chinese students may feel confused and hesitant when communicating or interacting with "cultural others" (Holmes, 2009, p. 75). Chinese and New Zealand students will require cross-cultural communication skills to interact successfully with each other (Holmes, 2009).

Holmes, using Hall's (1976) idea of interpersonal relationships, indicates that communication in Chinese classes is indirect, which is derived from the hierarchical and interpersonal relationship between student and teacher. Holmes argues that the communication style between students and teachers in New Zealand classrooms is a "dialogic approach" (Holmes, 2006, p. 22). This means students are encouraged to ask questions of teachers and peers, raise issues and "ask for elaboration or qualification of ideas expressed, and express opinions" (Holmes, 2006, p. 22).

## Acculturation

Lowinger, He, Lin and Chang state that acculturation is "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members" (2014, p. 698). They confirm that acculturation, required of international students, is a process of adjusting social and psychological behaviour in order to integrate with mainstream culture in their new host country. Some international students competently adapt to a new living and study environment, but others feel it is extremely hard to fit into a new environment, or may not want to integrate, and this may cause acculturative stress and anxiety (Smith & Khawaja, 2011).

Myers-Walls, Frias, Kwon, Ko and Lu (2011, cited in Lowinger et al., 2014) state that Asian international students generally tend to experience more acculturation stress than European international classmates, as there is a greater difference between the home and the host cultures. Acculturation is often regarded as an essential factor for Chinese international students' successful psychological adjustment (Mallinckrodt & Wang, 2006) and, in turn, this can be determined by acculturation to the mainstream culture (Mallinckrodt & Wang, 2006; Lowinger et al., 2014). Chinese international students who adjust to certain Western values and other cultural and social elements tend to have fewer psychological difficulties (including depression) and language concerns (Lowinger et al., 2014). Essentially, cultural adaptation helps Chinese international students communicate and cope with cultural and social changes more effectively. If Chinese international students adapt to a new culture effectively, they will have a better learning experience (Lowinger et al., 2014).

## METHODOLOGY

This research orchestrated an online survey to attain information from Chinese students attending Otago Polytechnic. Approval through the Ethics Committee of Otago Polytechnic was obtained and one member of staff from the International Department sent survey emails via Qualtrics.[2] The survey remained open for four weeks between mid-October and mid-November 2016. Yet, of the 123 current Otago Polytechnic Chinese international students emailed, only 26 provided valid responses (making the response rate 21.14%). In hindsight, the survey may have produced more successful feedback results had prompt emails been sent out to students and/or positive participation incentives such as a prize draw been offered.

The survey included demographic questions regarding gender and age including reasons for choosing New Zealand and Otago Polytechnic; what types of learning the students preferred, including interactive versus passive; what differences there were between Chinese and New Zealand learning environments; what the students believed helped them study successfully; what barriers there were to studying; what they would choose to change including the learning environment at the institute, support provided, the course content and their living conditions; and what they found positive about studying in New Zealand.[3]

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2    Qualtrics is an online research platform and data management system that allows users to generate, distribute and retrieve surveys.
3    A full list of survey questions can be found in Appendix 1.

# FINDINGS AND DISCUSSION

## Demographics

Of 123 Chinese international students at Otago Polytechnic who were invited to participate in the survey, 26 students responded. Within this group there were 10 students (38%) who identified as male and 16 students (62%) who identified as female. The survey questions are included in Appendix 1.

Figure 1:
Gender breakdown of
26 student responses
to Qualtrics survey.
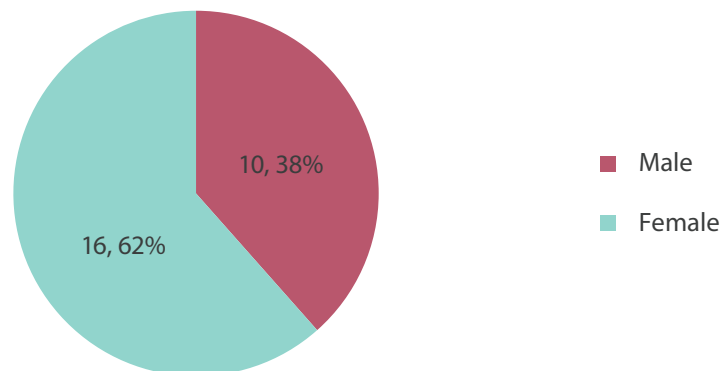


Figure 2:
Age breakdown of
26 student responses
to Qualtrics survey.
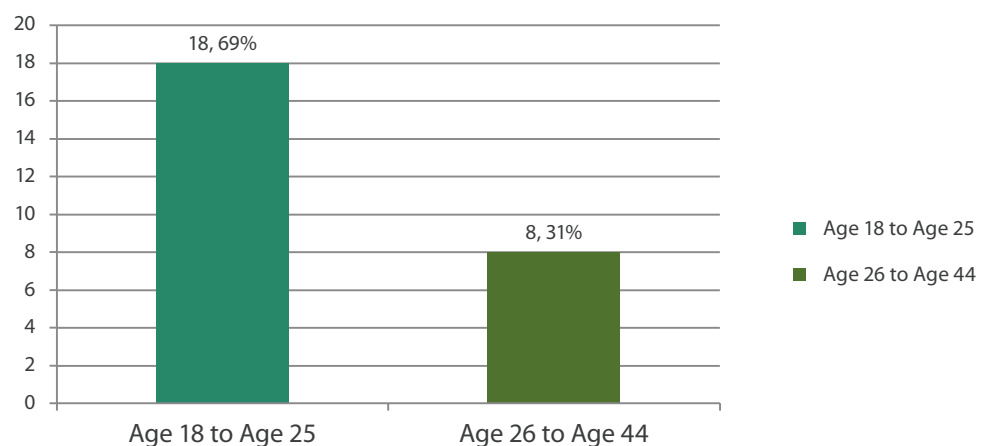


Of the 26 respondents, 10 students recognised graduating from high school (in China or New Zealand) as their highest level of education, two students achieved an undergraduate diploma or certificate before they enrolled at Otago Polytechnic, 10 students had achieved a bachelor degree, two students had a doctoral degree, and the final two answered with 'other'.

## Learning experience

New Zealand's perceived safe social and study environment is one of the most significant factors attracting Chinese international students (New Zealand Education Review, 2016). New Zealand is also considered to have a high standard of living, a low crime rate compared to America and Europe, and a reasonably stable government (New Zealand Education Review, 2016). In addition, New Zealand's learning environment offers good study opportunities and

support services for international students. All the above-mentioned elements were cited as important to Chinese international students in their responses.

## Language issues

The survey asked participants what their experience of using the English language was like for reading, writing, listening and speaking. They were able to rate each option as 1=extremely easy, 2=moderately easy, 3=slightly easy, 4=slightly difficult, 5=difficult or 6=very difficult. The results indicate that most found writing English was relatively harder and listening to English was relatively easier.

Fidteen out of 25 students (60%) thought that writing was harder than reading, speaking and listening, with 10 students choosing writing as 'slightly difficult', five students choosing writing as 'difficult', and no students choosing 'very difficult'. This result is consistent with the research done by Lee et al. (2013), with 18 of the 26 survey respondents commenting that writing essays and assignments are the most difficult of academic tasks, due to problems understanding the questions.

Twenty out of 26 students (76.92%) thought that listening was an easier English skill than reading, writing or speaking. Although the interview respondents had met New Zealand tertiary entry requirements by either passing the International English Language Testing System (IELTS) or meeting NCEA requirements from a New Zealand high school, the findings indicate that all the respondents had difficulty in using English for academic purposes. In total, ten male participants had a higher mean IELTS score across reading, writing, listening and speaking in English, averaging a 3.2 mean, than 16 female students who averaged 2.4, indicating that male participants generally find it harder than female participants to master English for academic purposes.

## Communication styles

This study found that the ability to participate in class is an issue for most Chinese international students. The survey found Otago Polytechnic has more interaction between students and tutors in class than the students would have had in China, and this learning environment offers more practical and work-focused activities. Otago Polytechnic promotes itself as having a student-oriented teaching method where lecturers and tutors like to hear different voices and opinions from the students in the class. However, the survey reveals that Chinese students commonly face difficulties with participating in group settings. For example, more than half of the survey respondents (52%) indicated that 'Group work with other English-speaking students' is the most challenging part of class (see Table 1 below). These findings were consistent with the research by Lee et al. (2013), who found that most students had difficulties in having class discussions with their peers and expressing opinions with their lecturers.

| What are the main difficulties you have found in your classes? | Percentage |
|---|---|
| Face-to-face communication with teacher | 4% |
| Following and understanding the content of PowerPoint | 12% |
| Group work with other English-speaking students in my class | 52% |
| Understanding reading materials | 28% |
| Other (work placement or Internship) | 4% |
| Total | 100% |

Table 1: Survey results of 'main difficulties' respondents found in class.

Apart from English-ability issues, a different cultural background can affect the way students communicate with their lecturers. Holmes argues that, "Confucian ideology influences students' communication patterns with lectures. In Confucian heritage a culture's knowledge is not to be questioned, but to be accepted and learned" (Holmes (2000) as cited in Lee et al., 2013, p. 926).

## Independence

Current literature on this topic confirms that independence is a significant factor leading to successful study (Lowinger et al., 2014). Otago Polytechnic lecturers give students freedom to think and to organise their own studies, and tertiary students in New Zealand must embody independence and think critically in order to succeed academically. Modern learning systems require students to have independent ideas when writing assignments, conversing with teachers or classmates, and completing practical tasks. Yang, Li and Sligo (2008) confirmed that Chinese students feel a lack of supervision in the New Zealand learning environment, as Chinese teachers usually take care of both study and wellbeing, while New Zealand teachers usually only take care of students' academic performance. This survey confirmed that at Otago Polytechnic, issues with class material can be taken directly to the tutor in class. However, if the student has issues not relating to course material, they have the option to see the student support staff on campus, who are able to provide moral support as well.

## Acculturation

Many international Chinese students experience cultural-adaptation challenges. When students try to adapt to a new environment, they may face psychological issues including depression and homesickness. In order to reduce cultural adaptation difficulties, every academic department at Otago Polytechnic offers activities for international students – which include tours of the Dunedin area, social events with other students in different departments, and connections with outside social groups for sporting or cultural experiences – as well as support services.

The Chinese international students at Otago Polytechnic were overall extremely satisfied or somewhat satisfied (up to 92%) with campus facilities. The main areas included in this percentage in order of satisfaction were the library, then student support, then student health and, finally, learning advice. This is not surprising considering that most Chinese international students use the library on a regular basis, have some contact with student support, contact with student health when sick, and seek learning advice when they are finding work in the course somewhat challenging.

In summary, the survey findings indicated that a large number of Chinese participants were satisfied with the facilities they had used before. However, the results also revealed that some Chinese international students had never used these Otago Polytechnic services.

| Overall how satisfied are you with the Otago Polytechnic campus facilities? | Percentage |
| --- | --- |
| Extremely satisfied | 44% |
| Somewhat satisfied | 48% |
| Neither satisfied nor dissatisfied | 8% |
| Somewhat dissatisfied | 0% |
| Extremely dissatisfied | 0% |
| Total | 100% |

Table 2: Survey response of respondent satisfaction with campus facilities.
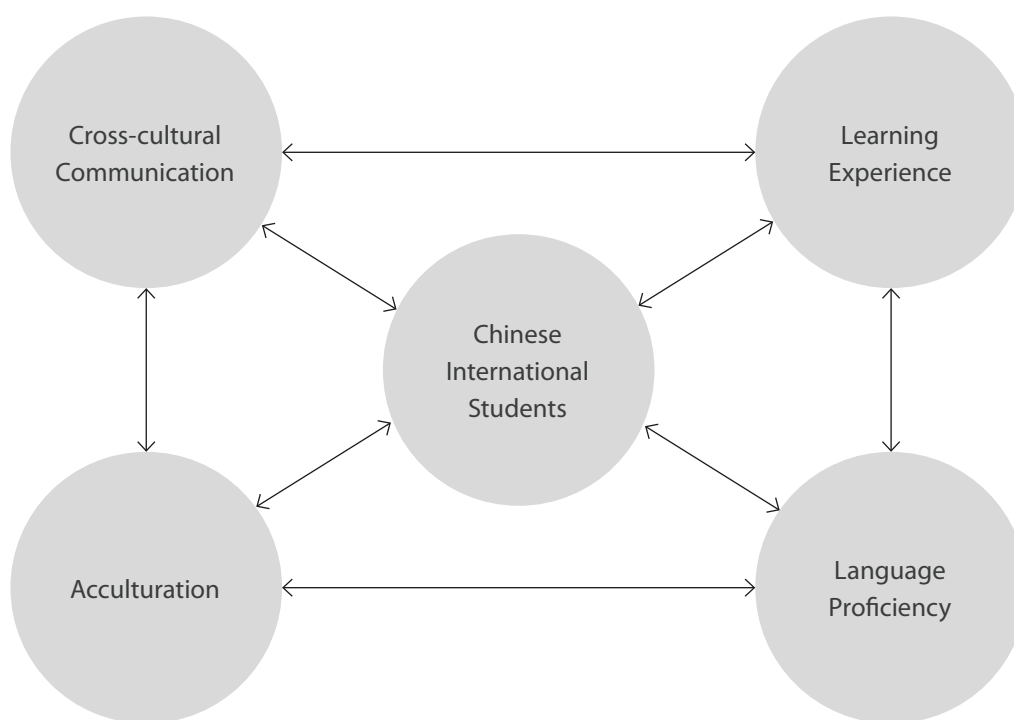
Figure 1. Chinese international student model of success.

## CONCLUSION AND IMPLICATIONS

Due to the small size of the research sample these findings can only be representative of the views of the participant group and cannot be generalised to a larger population. In future, the researchers would survey more current Chinese international students, or observe a range of other international student cultures to gather more information about the issues they encounter.

Following on from the findings of this survey, a learning model of success is proposed for Chinese students studying at Otago Polytechnic. This model acknowledges the need for interaction, and includes a range of factors in order for Chinese international students to have a successful tertiary study journey at the Polytechnic. The factors are cross-cultural communication, learning experience, acculturation and language proficiency. Each factor is linked with the others and is imperative to the overall success of Chinese students' study experience. This holistic approach would provide a model of success for Chinese students studying at the Otago Polytechnic.

For this model to be successful the institution needs to ensure that the academic and support staff work together to provide a supportive consistent approach to the students' learning and experience whilst in New Zealand. One team should not work in isolation from the other and this is imperative to the success of the model. To enable this model to be successful it would be appropriate to have a point of contact in the academic area alongside a point of contact in the support services area. Close monitoring and the inclusion of peer support would also enable the success of the model. Consistent communication that is ongoing is also required for this model to be successful. The lecturers need to work at providing a learning experience that engages the Chinese international students with the content and other with students within the classroom environment. It is important to give clear comprehensive instructions and also use English language that is as free of jargon as possible. Giving the opportunity for the Chinese students to speak, present and converse in each class will also build a positive learning experience whilst improving their English proficiency skills.

Student Support services need to continue to work with Chinese international students providing information and services that include academic support and also social opportunities for the Chinese international students to increase their engagement and acculturation into New Zealand. This would be in conjunction with their academic lecturers who should all be aiming to provide the best learning experience for these students.

Opportunities for work placement and internship opportunities, along with experiential field trips and learning experiences, should be included in the Chinese international students' learning experience, building their cross-cultural communication skills and confidence while studying at Otago Polytechnic and living in New Zealand. The holistic approach to this model of success is integral to its implementation and to success for these students.

## FUTURE RESEARCH

Potential future research in this area would include a more in-depth study of Chinese international students in New Zealand tertiary institutes. Such a study could employ interviews and face-to-face surveys, and would benefit from a larger number of research participants from a variety of different tertiary organisations in New Zealand. Additionally, trans-Tasman research, using the above proposed model, may also be beneficial to assisting Chinese international students at English-speaking tertiary institutes in the region.

## REFERENCES

Gebhard, J. G. (2012). International students' adjustment problems and behaviors. *Journal of International Students*, *2*(2), 184-193.

Guan, X. Y., & Jones, G. (2012). 'Un-learning and re-learning': The experiences of Chinese undergraduates in a first year management class in New Zealand. *Educational Research and Reviews*, *7*(12), 292-296.

Hall, E. (1976). *Beyond culture.* New York: Anchor Press.

Hammond, S., & Gao, H. (2002). Pan Gu's paradigm: Chinese education's return to holistic communication in learning. In X. Lu, W. Jia, & R. Heosey (Eds.), *Chinese communication studies: Contests and comparisons* (pp. 227-244). Westport, CT: Ablex.

Holmes, P. (2006). Problematising intercultural communication competence in the pluricultural classroom: Chinese students in a New Zealand university. *Language and Intercultural Communication*, *6*(1), 18-34.

Holmes, P. (2009). Foregrounding harmony: Chinese international students' voices in communication with their New Zealand peers. *China Media Report Overseas*, *5*(2), 74-83.

Lee, B., Farruggia, S. P., & Brown, G.T.L. (2013). Academic difficulties encountered by East Asian international university students in New Zealand. *Higher Education Research & Development*, *32*(6), 915-931.

Lowinger, R. J.,He, Z. M., Lin, M., & Chang, M. (2014). The impact of academic self-efficacy, acculturation difficulties, and language abilities on procrastination behavior in Chinese international students. *College Student Journal*, *48*(1), 141-152.

Mallinckrodt, B., & Wang, C. (2006). Acculturation, attachment and psychological adjustment of Chinese/Taiwanese international students. *Journal of Counselling Psychology, 52*(4), 422-433.

Martirosyan, N. M., Hwang, E., & Wanjohi, R. (2015). Impact of English proficiency on academic performance of international students. *Journal of International Students*, *5*(1), 60-71.

New Zealand Education. (2016). China. Retrieved from https://enz.govt.nz/markets/china/

New Zealand Education. (2015). Facts sheet: China. Retrieved from http://nziec.co.nz/wp-content/uploads/2015/08/Factsheet-China.pdf

Otago Polytechnic. (2016). Dunedin. Retrieved from https://www.op.ac.nz/students/campuses/dunedin/

Qian, D., & Zheng, T. T. (2012). Is skill in the English language the main problem for international students? *Quarterly Journal of Chinese Studies*, *4*(1), 6-17.

Study Plus. (2016). Why New Zealand? Retrieved from http://www.studyplus.co.nz/content/why-new-zealand

Smith, R., & Khawaja, N. (2011). A review of the acculturation experience of international students. *International Journal of Intercultural Relations, 35*(6) 699-713.

Yang, Y., Li, M., & Sligo, F. (2008, July). Chinese international students' satisfaction levels with their learning experiences in New Zealand. Paper presented at ANZC08 Conference: Power and Place. Retrieved from http://anzca08.massey.ac.nz

Zhang, Y. (2016). International students in transition: Voices of Chinese doctoral students in a U.S. research university. *Journal of International Students*, *6*(1), 175-194.

Zhang, P. (2016). Graduation Day at Otago Polytechnic. Retrieved from https://www.studyinnewzealand.govt.nz/blog/graduation-day-otago-polytechnic

## APPENDIX 1

## Survey questions

1.     What is your gender?

   – Male
   – Female

2.     What is current your age? _____

3.     Which year did you come to New Zealand? _____

4.     Have you visited New Zealand before you enrolled as an international student?

   – Yes
   – No

5.     Before coming to New Zealand, what was your highest level of education?

_____

6.     What is your course of study at Otago Polytechnic?

_____

7.     What is your current IELTS score?

_____

8.  What do you find the most difficult part in the academic environment of learning at Otago Polytechnic?

    _____

9.  Tell me your experience of using English language including reading, writing, listening, speaking;

    Extremely easy / Moderately easy / Slightly easy / Slightly difficult / Difficult / Very difficult

    – Reading
    – Writing
    – Listening
    – Speaking

10. How much do you think language barriers are affecting your academic study at Otago Polytechnic?

    – Always
    – Most of the time
    – About half the time
    – Sometimes
    – Never

11. How well do you find the academic staff communicate in your classes?

    – Always
    – Most of the time
    – About half the time
    – Sometimes
    – Never

12. What are the main difficulties you have found in your classes?

    – Face-to-face communication with teacher
    – Following and understanding the content of PowerPoint
    – Group work with other English-speaking students in my class
    – Understanding reading materials
    – Other (please specify)

13. What are the main difficulties you have found in your tutorials?

    – Face-to-face communication with teacher
    – Following and understanding the content of PowerPoint
    – Group work with other English-speaking students in my class
    – Understanding reading materials
    – Other (please specify)

14.     What is your most preferable study method at Otago Polytechnic?

e.g., preparation before class, attending class on time, group discussion with students, discussion with tutors in class and after class, taking good notes in class, reviewing class material frequently, studying in the library everyday, etc.

Please write down your specific answers.

    _____


15.     What is your least preferable study method at Otago Polytechnic?

e.g., preparation before class, attending class on time, group discussion with students, discussion with tutors in class and after class, taking good notes in class, reviewing class material frequently, studying in the library everyday, and etc.

Please write down your specific answers.

    _____


16.     What type of assessment methods would you prefer to have at Otago Polytechnic and why?

    _____


17.     What campus facilities are you using most to assist your studies?

- Library
- Student Support
- Learning Advice
- Counselling
- Student Health
- Student Association


18.     Overall how satisfied are you with the Otago Polytechnic campus facilities?

- Extremely satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Extremely dissatisfied


19.     What do you like most about the campus facilities? _____


20.     What do you like least about the campus facilities? _____


21.      What is the one key suggestion you would give to a student thinking about study at Otago Polytechnic?

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# LEARNING ON COUNTRY AS EDUCATIONAL PRAXIS

RON NICHOLLS

PETER WALKER

CHRIS ROSE

# ABSTRACT

The paper explores the notion of learning on country as a unique pedagogical approach through educational engagement with an Aboriginal community in South Australia. Experiential learning provides a methodology of educational praxis whereby skills and knowledge are acquired through processes of participation and the co-emergence of learner and setting. Since 2013, Master of Sustainable Design students at the University of South Australia have been involved in field trips to Camp Coorong and the Raukkan community as part of an interactive experience and discussion with Ngarrindjeri elders.

A holistic and interconnected perspective underpins the physical, social, financial, emotional, intellectual and spiritual growth of individuals in both communities, and many initiatives and activities are developed with regard to long-term sustainability and responsible use of resources. Students engage with Ngarrindjeri worldviews, beliefs and values, participate in cultural activities and share design ideas and perspectives with Ngarrindjeri elders. Interactions between students and elders strengthen an understanding of Ngarrindjeri relationships to country,[1] further enhancing a knowledge of the socio-cultural environment of Aboriginal people.

The methodology utilises an 'open brief' pedagogy, defined as creative thinking in empathetic theory, and ecological design thinking processes are embedded in a non-prescriptive sustainable design framework. Transferrable to other disciplines and contexts, the authors maintain that an acknowledgement and understanding of differing perspectives, combined with a transformative pedagogical approach, provides a more meaningful matrix for new and alternative design ideas to unfold.

# INTRODUCTION

The paper explores educational processes, pedagogy, and the benefits of reciprocal and collaborative learning between the Raukkan community, the Ngarrindjeri Land Progress Association (Camp Coorong), and staff and students of the Master of Sustainable Design programme in the School of Art, Architecture and Design (AAD), University of South Australia (UniSA). The masters consists of five courses, and, since 2013, GRAP 5006: Design Research Studio 2 has developed a collaborative learning framework that combines Ngarrindjeri knowledges, worldviews and critical ecological design thinking to foster creative thinking, practices and ecological understandings within real-world design experiences (please refer to Appendix 1 for additional information about the Ngarrindjeri peoples). Drawing on national and international scholarship, the unit continues to provide a conduit between Indigenous communities and UniSA through the implementation and development of design praxis, worldviews and Indigenous knowledges.

Discussions explore aspects of the interface between science, dissipative structures, creative processes, critical eclecticism and respectful, enduring relationships with the natural world – thus highlighting a critical ecological pedagogy that underpins and supports the learning experience. Transferrable to collaborative projects in other disciplines and contexts, we suggest that the approach offers opportunities for consultation and practical engagement with Indigenous communities. The acknowledgement of all partners as co-learners is a distinctive characteristic of the pedagogical principles, and the acknowledgement of diverse ontologies and cultural worldviews is grounded in the creative tension of differences (Doczi, 1981) and holistic learning theory (Kumar, 2008).

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1    For Aboriginal people, culture, nature and land (country) are interconnected and based on each community's distinct culture, traditions and laws.

## PROGRAMME DESIGN

The course consists of a range of modules over 13 weeks and explores collaborative cultural learning initiatives (Heron, 1992) through an 'open brief' methodology. It also incorporates ecological design thinking as an interdisciplinary model relevant to national and international curriculum design and is based on creative thinking and sustainable solutions in response to real-world problems. As an integral part of the course, students participate in a variety of learning activities such as alternative worldviews, smoking ceremonies, traditional weaving, bush-tucker walks and historical tours, and interaction with Ngarrindjeri people is facilitated by two separate three-day field trips to Camp Coorong and Raukkan. Students engage with Ngarrindjeri beliefs and values, participate in cultural activities, and share design ideas and perspectives with Ngarrindjeri elders. This offers an experiential introduction to the communities, histories, relationships to land and waters (Ruwe),[2] and the holistic and interconnected social and spiritual worldviews that students' design proposals will respond to and address. While students develop a number of presentations and discussion perspectives throughout the course, the final showing and critique of their major design project entails the staging of an exhibition of their work at the university.

Significant aspects of the curriculum underpinning the project are a critical ecological pedagogy and praxis which enables students to experience collaborative and cultural interactions with staff, members of Indigenous communities and their peers. While an open brief design can be challenging, throughout the course students are exposed to experiential, objective, and practical ways of learning with inputs from Indigenous and design studies, ecological perspectives, critical cultural perception, eco-psychology, and contemporary science. It should be noted that student proposals are not initially put forward as specific design ideas, but rather as vehicles for communicating and sharing ideas between cultures. However, the community has access to the resulting ideas and proposals, which range from utilising straw bales (a locally-available product), the design of a cultural centre, and the development of art/craft/design and summer programmes for the sharing of Indigenous knowledge and skills (such as weaving workshops and youth programmes). Other projects have envisioned community landscaping connecting the civic centre with the waterfront, architectural systems based on traditional structures, water capture technologies, eco units,[3] and books and games aimed at connecting children with the natural heritage and culture of Ngarrindjeri country.

The course content also fosters a knowledge of regenerative design principles and addresses cooperative learning alongside a conscious and integral relationship with the Ngarrindjeri people and their profound connection to place. Participative exchanges also prioritise the exploration of transformative learning standpoints informed by pedagogies of wholeness, relatedness and interconnectedness. As Morrell and O'Conner (2002) argue, transformative learning requires:

> [A] deep structural shift in the basic premises of thought, feelings, and actions – a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-location, our relationships with other humans and with the natural world. (p. xvii)

Moreover, regarding possibilities for structural shifts and new ways of being in the world, the very nature of meeting and collaborating with Ngarrindjeri peoples on country opens possibilities for addressing alternative ways of being and knowing, and a range of creative responses beyond usual reactive inclinations.

## LITERATURE REVIEW

Jack Mezirow (1978; 2000) and John Dirkx (1998) are theorists who advocate the theoretical foundation for transformative educational practices. While there were differences in scope, Mezirow's initial ideas were largely built

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2    Ruwe is the Ngarrindjeri name for country (or land).

3    Raukkan recently acquired a building in a small town near the community, which is being used as a venue for meetings, a youth programme and educational space, and have developed a business plan that includes the possibility of a number of eco-units to be designed and built for accommodation to facilitate learning on country.

on a cognitive and rational approach, while Dirkx's learning philosophy also included personal, spiritual, emotional and imaginative ways of knowing. However, by 2006, both agreed that their perspectives had mutual ideas and concerns about transforming frames of reference, and both were interested in "fostering enhanced awareness and consciousness of one's own being in the world" (Dirkx, Mezirow, & Cranton, 2006, p. 37). Edmund O'Sullivan (1999) also developed many of these ideas and, while critiquing current notions that the main purpose of education is to prepare individuals to compete in the global marketplace, he argues for an educational praxis that must first equip people with a deep understanding of history, the transitions which are now occurring, and a vision for possible new directions. Similarly, Olen Guunlaugson is a strong proponent of integral theoretical perspectives (Wilber, 2001) as part of an understanding of these different perceptions and practices (Guunlaugson, 2005).

Central to the different approaches associated with the course is a focus on what architect Gyorgy Doczi (1981) calls "the power of limits" and, as he notes, many of the powers that shape our lives refer to aspects of the pattern-forming processes and union of opposites embedded in the natural world:

> The discipline inherent in the proportions and patterns of natural phenomena, and manifest in the most ageless, and harmonious works of man (sic), are evidence of the relatedness of all things. (1981, p. 1)

In acknowledging this relatedness and coherence, Doczi suggests that, in our confrontation with and concerns surrounding the ecological issues of the period,[4] we have, perhaps, lost sight of the power of limits (Doczi, 1981, p. 3). Thus he suggests that:

> [T]he proportions of nature, art, and architecture can help us in this effort, for these proportions are shared limitations that create harmonious relationships out of differences. Thus they teach us that limitations are not just restrictive, but they are also creative. (1981, preface)

By 'creative', Doczi is referring to the order common to all natural and human creations that appear in certain proportions repeatedly. For example, yin and yang (shadow and light), soft and hard, feminine and masculine, East and West, rational mind and intuitive heart (Doczi, 1981; Hutchins, 2014). Consequently, Doczi maintains that as there was no adequate single word for this universal pattern of creative processes, he combined the Greek *dia* – meaning 'across, through or opposing' – and 'energy', creating the term 'dinergy' to signify the creative energy of organic growth (Doczi, 1981, p. 3).

Similarly, in music, Doczi (1981) suggests harmonies (from the Greek *harmonia* meaning 'to fit together'*)* are dinergistic relationships, where contrasting elements complement each other or integrate to create what he calls a pleasant attunement of differences (Hutchins, 2014). The tension is not only to do with the relationship between notes, but also arises from the silences between the notes. This recalls the concept of *ma*, which permeates different aspects of Japanese music and architecture, as a significant illustration of the primal creative tension of opposites (Hutchins, 2014). Thus, it is the limits, boundaries or thresholds within nature that are both restrictive and creative.

## DISCUSSION

The above suggests something of the pedagogical and interactive engagement between students and the Ngarrindjeri community, and the significance of what the Yolngu peoples[5] in Northern Australia have called Ganma and Garma, meaning 'both ways' or 'two ways' philosophy and education. Both ideas are based on metaphors of place and space; Ganma is a water metaphor, which is often taken to represent knowledge in Yolngu philosophy, and is described by Raymattja Marika as:

---

4    The warnings he mentions are associated the depletion of the earth's resources in 1981, and of course the situation is much worse now.
5    An Aboriginal language group from Arnhem Land in Northern Australia.

…an area within the mangroves where the saltwater (non-Aboriginal or Balanda Knowledge [6]) coming from the sea, meets the stream of fresh water (Yolngu Knowledge). The water circulates silently underneath and there are lines of foam circulating across the surface. (1992, p. 112)

While the knowledges from the different cultures gradually mix, each system is preserved (as the sea and the fresh water remain distinct) and respected. On this basis Garma is seen as "an open ceremonial area that everyone can participate in and enjoy and also means an open forum where people can share ideas and everyone can work hard to reach agreement" (Marika, 1999, cited in McConvell, 2000, p. 2).[7] From Doczi's viewpoint, this creative tension is an example of the "communion between these seemingly oppositional forces"' and, "is what induces growth and breathes life" (Hutchins, 2014, p. 142). It also can be perceived as a liminal space, or catalyst for the emersion of new perspectives and experiences where two-way learning can take place.

This union of opposites, encapsulated in both Doczi's idea of dinergistic relationships and the interactive relationships associated with the Ganma metaphor, reflect the pedagogical implications of experiential learning addressed by a transformative learning approach. Consequently, and underpinned by a critical eclecticism, the programme design seeks to provide students with a variety of participatory inputs involving the integration of new ideas and experiences within the learner's existing (and deeply embedded) knowledge systems, which are often largely analogous to a present globalising worldview. Indeed, despite the more recent influences of postmodernism within formal educational spaces, this paper suggests that educators and students continue to be, for the most part, embedded within Enlightenment intellectual and cultural landscapes. A worldview that privileges a fragmented theory of knowledge, modes of reasoning (Bohm, 1980) and lifestyle that stimulates increasingly alienated and narcissistic human social systems, which often preclude the emergence of new and innovative ideas.

However, these precepts have been under challenge since the early twentieth century and this, combined with a range of global environmental issues, has precipitated a new awareness and critique of the assumptions underlying Enlightenment and modernist worldviews. This brings into focus the need for the recognition of alternative paradigms (Russell 2006; Sahtouris, 2006), and researchers at the frontier of philosophical and scientific research are recovering an understanding of a "cosmos that is connected, coherent, and whole, [and] recalls an ancient notion that was present in the tradition of every civilization; it is an enchanted cosmos" (Laszlo, 2006, p. 2). Yet, while modernist ideas continue to strongly influence the present economic, technological and educational landscape, the author maintains that an experience of differing worldviews, combined with a dinergistic pedagogical approach, offers a meaningful atmosphere for new ideas and ways of being to unfold.

The notion of interconnected wholes also complements the ideas of systems thinking and regenerative design[8] principles that have emerged in the late twentieth century. Accordingly, the properties of living systems can be seen in terms of connectedness, relationships and context rather than isolated entities (Capra, 1996). Moreover, these ideas have been founding principles of many pre-modern societies, Eastern philosophy and thought, and more recently ecological and scientific perspectives, all of which include a notion of an indivisible reality which underlies and unifies the multiplicity of things (Bohm, 1980; Capra, 1996; Laszlo, 2006; Sheldrake 2009).

From an Indigenous Australian perspective, the Dreaming worldview[9], in a similar way, provides a conceptual basis of

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6    Balanda knowledge means white-fella knowledge.
7    An earlier version of Ganma was slightly different, and in this iteration Ganma is taken as describing the situation where a river of water from the sea (in this case Balanda knowledge) and a river of water from the land (Yolngu knowledge) mutually engulf each other on flowing into a common lagoon and become one (Marika et al., 1992, p. 28).
8    A system of technologies and strategies for generating the patterned whole-system working of ecosystems that produces design to regenerate rather than deplete underlying life-support systems and resources within socio-ecological wholes (Mang & Reed, 2012).
9    The Dreaming is many things in one. Among them, a kind of narrative, of things that once happened; a kind of charter of things that still happen; and a kind of logos or principle of order transcending everything significant for Aboriginal man [sic]. … It is a cosmogony, an account of the begetting of the universe, a study about creation. It is also a cosmology, an account or theory of how what was created became an ordered system. To be more precise, how the universe became a moral system (Stanner, 1979, pp. 57-61).

country (i.e. the natural world) as a living, interconnected entity with intentionality. As Kwaymullina states:

For Aboriginal peoples, country is much more than a place. Rock, tree, river, hill, animal, human – all were formed of the same substance by the Ancestors who continue to live in land, water, sky. Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and country loves, needs, and cares for her peoples in turn. Country is family, culture, identity. Country is self. (2005, p. 12)

Such thinking provides possibilities for an ontological and epistemological basis for the collapse of the divide between the perceiver and that which is perceived, the embeddedness of humans in the natural world, and perception as a deeply participatory encounter – an encounter that clearly establishes our connectivity and interaction with all things (Abram, 1996; Bortoft, 2015). This also indicates something of the unique correlation between parts and wholes in living systems which biologist Lynn Margulis has designated as endosymbiosis or 'symbiosis within' (Margulis cited in Harding, 2006, p. 165). As Margulis has convincingly demonstrated, evolution is the result of cooperative as well as competitive processes, a perception that may come as a shock to many economic theorists who continue to promote the role of competition in market-based systems as the most natural and effective means by which to determine the allocation of resources.

From an educational point of view, and as our worldviews are systems of beliefs and values that shape how we see and act into the world, these steps from a detached and mechanistic worldview to an ecological or living systems worldview are essential (Mang & Reed, 2012). Hence, we argue for the adoption of a position that reframes the present mindset inherited from modernist paradigms, and reinforces the necessity of continuing to explore the potential for alternative positions and standpoints to disrupt taken-for-granted and assumed ways of design thinking. This approach provides a more flexible emphasis on a pedagogical positioning of processes rather than focusing on outcomes (although they are a significant aspect of the course). A pedagogical mode of positioning that provides alternatives to the primacy of positivist ways of knowing (the subject/object split) and cultivate an understanding of the necessity for a balance between objective and intuitive modes of knowing, centred on interdependent relationships grounded in interconnected and holistic perspectives.

In this formulation we also apply the concept of the term critical in the sense that educator Paulo Freire (Grollios, 2009) adopts within his critical pedagogy. Thus, educational content should not be separated from social and environmental contexts or be disassociated from critical discussion, and should be related to social, political, economic and cultural values. Therefore, an ethic, or system of values from within the wider context of our embeddedness in the social and natural worlds can be seen as motivation for the development of ecological design thinking, the adoption and integration of a mindful understanding of the "patterns and flows of the natural world" (Orr, 1992, p. 20). Educational processes that encourage a deeper sense of the already-existing connections and obligation to the natural world, and an eco-consciousness and design ecology stemming from a love for, and understanding of, the Earth community in all its forms and manifestations.

## CONCLUSION

The learning on country design approach addresses a number of different areas associated with contemporary design, ecological design thinking and intercultural relationships. As a collaborative interaction between the Ngarrindjeri community and the University of South Australia, the course develops an interface between Western cultural perspectives, indigenous knowledges and recent ecological and scientific thought and, in essence, generates a transitional space that lies between the known and unknown. Through the medium of design, students move away from the binary opposites that are often presumed in these situations. Thus, a community of learners explores issues associated with alternative mental models and the development of design ideas from within an initial experiential interaction with the knowledges, structures and values of Ngarrindjeri worldviews. In general, the integration of students, staff, Aboriginal peoples and country provides a thought-provoking example of the creative tension of opposites, and includes possibilities for a union of complementary opposites, attuning humans and nature in an

empathetic and integrative relationship of care. The interlacing of indigenous ways of knowing, ecological design thinking, contemporary scientific thought and critical eclecticism highlights the significance of an educational praxis underpinned by learning experiences and the creative tension of dinergistic relationships. A positionality that can be defined as a processual circularity of time and energy that articulates the complex and dynamic formative processes of the connectivity, coherence and dynamic nature of change.

## REFERENCES

Abram, D. (1996). *The spell of the sensuous*. New York: Vintage.

Bohm, D. (1980). *Wholeness and the implicate order*. New York: Routledge.

Bortoft, H. (2015). *Taking appearance seriously: The dynamic way of seeing in Goethe and European thought* (2nd Ed.). Edinburgh, UK: Floris.

Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor.

Dirkx, J. (1998). Transformative learning theory in the practice of adult education: An overview. *PAACE Journal of Lifelong Learning*, *7*, 1-14.

Dirkx, J., Mezirow, J., & Cranton, P. (2006). Musings and reflections on the meaning, context and processes of transformative learning: A dialogue between John M. Dirkx and Jack Mezirow. *Journal of Transformative Education*, *4*(2), 123-139.

Doczi, G. (1981). *The power of limits: Proportional harmonies in nature, art and architecture*. Boulder, CO: Shambhala.

Guunlaugson, O. (2005). Toward integrally informed theories of transformative learning. *Journal of Transformative Education*, *3*(4), 331-353.

Grollios, G. (2009). *Paulo Freire and the curriculum*. Boulder, CO: Paradigm.

Harding, S. (2006). Animate earth: Science, intuition and Gaia. White River Junction, VT: Chelsea Green.

Heron, J. (1992). *Feeling and personhood: Psychology in another key*. Thousand Oaks, CA: Sage.

Hutchins, G. (2014). The illusion of separation: Exploring the cause of our current crisis. Edinburgh, UK: Floris.

Kumar, S. (2008). Study at Schumacher College. In A. Phillips, (Ed.), *Holistic education: Learning from Schumacher College* (pp. 11-19). Devon, UK: Green.

Kwaymullina, A. (2005). Seeing the light: Aboriginal law, learning and sustainable living in country. *Indigenous Law Bulletin, 6*(11). Retrieved from http://www.austlii.edu.au/au/journals/IndigLawB/2005/27.html

Laszlo, E. (2006). *Science and the re-enchantment of the cosmos: The rise of the integral vision of the universe*. Rochester, VT: Inner Traditions.

Mang, P., & Reed, B. (2012). Designing from place: A regenerative framework and methodology. *Building Research and Information*, *40*(1), 23-28.

Marika, R. (1999). Mithun laju waanga romgu yolngu: Valuing knowledge in the education system. *Ngoonjook*, *16*, 107-120.

McConvell, P. (2000). *Two-way research for Australian languages: Positioning resources in the GARMA*. Acton, ACT: Australian Institute of Aboriginal and Torres Strait Studies.

Mezirow, J. (1978). Perspective transformation. *Adult Education, 28*(2), 100-110.

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco, CA: Jossey Bass.

Morrell, A., & M, O'Conner. (2002). Introduction. In E. O'Sullivan, A. Morrell., & M. O'Conner (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. xv-xx). New York, NY: Palgrave Macmillan.

Ngarrindjeri Nation. *Ngarrindjeri Nation Sea Country Plan: Caring for Ngarrindjeri country and culture*. Meningie, SA: Ngarrindjeri Tendi; Ngarrindjeri Heritage Committee; Native Title Heritage Committee; Ngarrindjeri Land and Progress Association.

Orr, D. (1992). *Ecological literacy: Education and the transition to a postmodern world*. Albany, NY: State University of New York Press.

O'Sullivan, E. (1999). *Transformative learning: Education for the 20th Century*. Chicago, IL: University of Chicago Press.

Russell, P. (2006). Akasha and consciousness. In E. Laszlo, (Ed.), *Science and the re-enchantment of the cosmos: The Rise of the integral vision of reality* (pp. 144-156). Rochester, VT: Inner Traditions.

Sahtouris, E. (2006). From a mechanistic and competitive to a re-enchanted and co-evolving cosmos. In E. Laszlo, (Ed.), *Science and the re-enchantment of the cosmos: The Rise of the integral vision of reality* (pp. 101-108). Rochester, VT: Inner Traditions.

Sheldrake, R. (2009). *Morphic resonance: The nature of formative causation*. Rochester, VT: Inner Traditions.

Stanner, W. E. H. (2009). *The dreaming and other essays* (2nd edition). Melbourne, Australia: Black Inc.

Wilber, K. (2001). *Sex, ecology and spirituality: The spirit of evolution* (2nd edition). Boston, MA: Shambhala.

## APPENDIX 1

According to the Yarluwar-Ruwe Plan (2007) Ngarrindjeri peoples have occupied, enjoyed, and managed their lands and waters since creation. Prior to colonisation the nation was divided into 18 Lakalinyeri groups, each with their own defined territory, democratically elected government structures (Tendi) and a Rupulle (head of the Tendi). In 1859, after colonisation, the Aborigines' Friends Association founded the Point McLeay mission, with George Taplin as its first administrator. The management was taken over by the South Australian Government in 1916 and, although handed back to the community in 1974, the name was only changed from Point McLeay to Raukkan (meaning 'ancient meeting place') in 1984. About 150km southeast of Adelaide and situated on the shores of Lake Alexandrina, the community consists of a small settlement of roughly 190 people and farm holdings of approximately 12,000 hectares. A self-governing township since 1985, the community has continued to develop various commercial activities including a dairy, beef cattle, cropping, natural resource management, housing, the continuing development and maintenance of infrastructure and a café, all of which include training and employment for people residing in the community.

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# HACK EDUCATION

# CROWDSOURCING THE FUTURE OF EDUCATION IN NEW ZEALAND

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## ABSTRACT

Crowdsourcing is a twenty-first century phenomenon that relies on Web 2.0 technologies to enable the public to contribute to data gathering by organisations. It offers new ways of researching emerging topics that leverage the wisdom of crowds. Crowdsourcing originally developed as a way of identifying one or more 'winning' solutions from a crowd of contributors, and tended to be product focused. Over time, however, a variety of definitions of crowdsourcing has evolved, differing in terms of the specific types of crowd, initiator and process.

In this article, we explore the use of crowdsourcing as a research methodology, which involves outsourcing research tasks to large groups of self-selected people, both lay and expert. Unlike traditional surveys, crowdsourcing allows for a more iterative, idea-generating process, which can be more effective than other methods in future-focused research. We illustrate this approach using a case study – a project called Hack Education that was used to gather ideas about the future of education in New Zealand. This project used crowdsourcing both to gather and to analyse data.

Our case study reveals that crowdsourcing can provide different perspectives and other ways of analysing the same domain of interest. In particular, our data suggests that the crowd is able to give a somewhat broader, overarching set of ideas than is available from other channels. As such, crowdsourcing may provide a useful complement to more traditional research methods.

## CROWDSOURCING AS A TERM

Crowdsourcing was originally posited as a way to tap the latent talent of the crowd through the internet (Howe, 2006a). Its key characteristics are an open call for contributions and a large network of potential contributors, or 'labourers' as originally stated (Howe, 2006b). In these early definitions, there is some concept of a winning contribution, that out of the crowd there emerge only a few winners who receive financial gain. This is in contrast to other crowd activities in technology, such as open-source software development, where there is no expectation of financial gain by the participating crowd (Brabham, 2008). However, in the related concept 'the wisdom of crowds', the emphasis is on aggregation of individual contributions (Surowiecki, 2005).

Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012) note that there is a variety of definitions of crowdsourcing, and identify several variations in crowd, initiator and process that lead to these multiple interpretations. They propose a set of criteria that can be applied to activities to indicate if they can be classified as crowdsourcing. This classification is comprised of three main elements (crowd, initiator and process), and within these elements there are a total of eight characteristics. For the crowd, the characteristics are who forms it, what it has to do and what it gets in return. For the initiator, the characteristics are who they are, and what they get from the crowd. Finally, for the process, the characteristics are the type of process, the type of call and the medium used.

The structuring of a crowdsourcing process was explored by Thuan, Antunes and Johnstone (2017). Their process model comprises three high-level activities: the decision to crowdsource, technical configuration and design. The design activity is further separated into the components of task definition, workflow design, crowd management, quality control and incentive mechanism.

Combining the work of Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012) with Thuan, Antunes and Johnstone's (2017) provides a useful set of tools for designing and managing a crowdsourcing activity.

# CROWDSOURCING AS A RESEARCH METHODOLOGY

Crowdsourcing may be a valid form of acquiring goods or services, but in this article, we are more concerned with its role as a research methodology. Crowdsourcing research is defined by Williams (2013) as outsourcing research tasks to large groups of self-selected people, both lay and expert. Crowdsourcing as a research methodology offers some new and useful ways of accessing data, working with data, and democratising data collection and analysis. Employing crowdsourcing as a research methodology draws on some of its potential to conduct research differently. Drawing on crowds for data collection and analysis can release researchers from certain constraints such as time and cost, and allow projects to be extended or increased in scope. For example, Williams (2013) sees crowdsourcing as being able to extend current methodologies by helping to triangulate data through accessing other large data sets that would not normally be included because of their size or a lack of research time.

Crowdsourcing data has some similarities with that of survey methodologies, but differs in several important ways. Surveys look for answers to specific questions on predetermined subjects, and the nature of feedback is controlled. Data is often used for statistical analysis, since much survey data is quantitative. Crowdsourcing differs in that it allows the participants to *open up* questions as well as providing answers, and the crowd leads the discussion. There is a continuous cycle of interaction between previous and current contributions, since crowdsourcing platforms make the contributions of others visible (Day, 2014).

Because crowdsourcing as a research methodology seeks participants to undertake research, it does raise questions of sampling quality and bias. The nature of the research tasks in crowdsourcing is often quite menial and does not interfere with the higher-order analysis or discussion. However Sabou, Bontcheva, & Scharl (2012) note that some overzealous or 'lazy' contributors could add bias to any crowdsourced research. In terms of sampling, we see crowdsourcing as much more than a sampling strategy. Drawing on the resources of crowds to engage in research is harnessing the intrinsic motivations in many individuals to contribute to further understanding, effecting what could be thought of as "altruistic crowdsourcing" (Sabou, Bontcheva, & Scharl, 2012, p. 2). As well as providing access to data collection and analysis that is beyond the scope of a single researcher or small team, crowdsourcing also supports a more iterative and generative approach to research, where analysis and reporting can proceed beyond the initial scope of the project (Williams, 2013). This was a feature we drew on in the case study described in this paper, where different groups of participants were able to help to code the data iteratively. Because crowd-based resources for analysis were available, the iterative and ongoing analysis of the case study was given more attention in our report.

Crowdsourcing as a research methodology can introduce dimensions of democratising data collection and provide an opportunity for more voices to be heard on a topic. Tourle (2017) noted how crowdsourcing, when applied to heritage studies/education, encouraged members of the public to engage in decisions on future options for heritage organisations. However, one pitfall of crowdsourcing for research purposes it that the collective voice may exclude others at the margins. Paulin and Haythornthwaite (2016), who looked at crowdsourcing the tertiary curriculum in a digital networked age, also shared concerns about how crowds and crowdsourcing can reinforce homogeneity in data and opinion, and by working independently of traditional sources of data. Other concerns raised by Sabou et al. (2012) note how issues of consent (what crowd participants are knowingly consenting to) and acknowledgement in terms of authorship needs considering for future crowdsourcing-research ethics processes.

# INTRODUCTION TO THE HACK EDUCATION CASE STUDY

This article explores a crowdsourcing case study that set out to capture public opinion on some aspects of the future of education in New Zealand. Hack Education was a marketing project that was launched in 2016 through The Mind Lab by Unitec to crowdsource ideas from the public about its vision for what New Zealand education could look like in the future. A dedicated website was made available for public responses to three trigger statements about the future of education. In the following sections we explain the crowdsourcing method used, the results gathered, and the insights gained from this process.

| Question | Responses | Codes generated from responses |
|---|---|---|
| "In the future education will be…" | 362 | Inclusive, Relevant, Responsive, Flexible, Personalised, Technology-focused, Fun, Innovative, Collaborative, Engaging, Twenty-first century, Accessible, Global, Future-focused, Digital, Real-world |
| "In the future education will not have…" | 214 | Assessment, Barriers, Places, Learning environments, Paper and pens, Philosophy, Environment, Curriculum |
| "I wish education…" | 312 | Future-focused, Individualised, Equity, Problem-based Learning, Differentiation, Engaging, Real world/ Twenty-first century, Agency, Cost, Authentic, Better funding, Inclusive, Student-needs-driven |
| Total | 888 | |

Table 1: Hack Education data and codes.

## RESEARCH METHOD

Data was gathered and analysed for this study using an approach that we have categorised according to the characteristics of crowdsourcing outlined by Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012). In our study, the crowd was the general internet public, who were asked to generate ideas, and recompensed through satisfying their desire to share knowledge. It should be noted that although the call to participate was public, and mostly distributed through online marketing channels, the site was specifically publicised to our student body of around 900 in-service teachers undertaking postgraduate study. There is no data on how many of these teachers and other stakeholders answered the questions, as participation was anonymous. However, we can assume that the proportion of educational stakeholders in the data was higher than in the general population.

The initiator was an educational institute, seeking to gain insights into future education for research and marketing purposes. The process might be described as open innovation (but with no specific products). The type of call was open – any interested party could participate – and the medium used was a Web 2.0 website, hosted at hackeducation. co.nz (not to be confused with other sites with similar names). The Hack Education website asked the public to complete any, or all, of the following sentences:

• In the future, education will be…
• In the future, education will not have…
• I wish education…

Importantly, the site allowed for an iterative process of idea generation from the crowd. Unlike a standard online survey, visitors to the site were able to view previous responses by question, by popularity and by most recent, as well as being presented automatically with some random selections from previous submissions.

The website was opened to the public in March 2016. The 888 responses used in this study were collected over a nine-month period and put into a master spreadsheet for analysis. Data was reduced and analysed through a process of collective coding and theming of the responses. This data analysis was performed through crowdsourcing by about

four hundred teachers on the Postgraduate Certificate in Applied Practice programme as part of their studies at The Mind Lab by Unitec. In groups of four, these teachers were given around ten lines of responses per group and asked to create "descriptive codes" (Miles, Huberman, & Saldana, 2014, p. 74) that would identify key themes in their data, and then enter these into a collaborative spreadsheet.

The codes that were produced through this crowdsourcing process were read by the researchers who authored this article, and the frequency of the codes were noted. Codes that occurred with a frequency of more than ten responses were included in the final list. Table 1 summarises the numbers of responses to each statement and the codes identified for each.

The next stage of the analysis focused on only two of the statements that had been presented, namely "In the future education will be…" and "I wish education…". The reason for excluding the statement "In the future education will not have…" was to enable focus to remain clearly on the crowd's positive visions of the future. Analysis of what should be excluded was left for a separate study. We merged the coded responses to the two statements to generate the following list of 13 concepts:

- Collaborative
- Digital
- Diverse
- Equal
- Flexible
- Future-focused
- Individualised
- Innovative
- Personalised
- Real-world
- Responsive
- Technology-dependent
- Twenty-first century (skills)

This list provided an idea about what the crowd identified as the core conceptual values of future education, but did not independently provide a view of what the overall domain might look like. In order to approach this question, another process of crowdsourced analysis was undertaken, whereby another cohort of about four hundred teachers, again in groups of four, were asked to link together pairs of concepts. This resulted in every pair of concepts having a number of linked statements that indicated how they might be related to one another in the context of the future of education. This gave a very large set of linking statements (n=833), which underwent another stage of data reduction and coding to try to identify the most important ideas that had surfaced around these concepts.

The final stage of the analysis was to integrate the set of 13 concepts identified in the first stage of the analysis with the most significant relationships between these concepts that had been identified in the second stage of the analysis into a domain model. A domain model captures the core concepts and their relationships in a specific domain. Figure 1 uses the domain model notation outlined in Unified Modeling Language (UML) (Jacobson, Booch, & Rumbaugh, 1999), where diamonds represent 'part of' relationships and arrowheads represent 'is a' relationships. These relationships are important where concepts have a relationship that is more closely integrated than simply having peer-to-peer links. In Figure 2, 'Individualised' is identified as a subset of 'Personalised', since personalisation is generally seen as a more generic concept of learner agency that detailed individualisation can support (Basye, 2016). Similarly, 'Future-focused' is seen as a subtype of 'Twenty-first century skills', in that 'Twenty-first century' is both present and future, but 'Future-focused' is a specialisation of that concept. 'Digital' is simply identified as 'part of' 'Technology-dependent' since not all technology is digital.
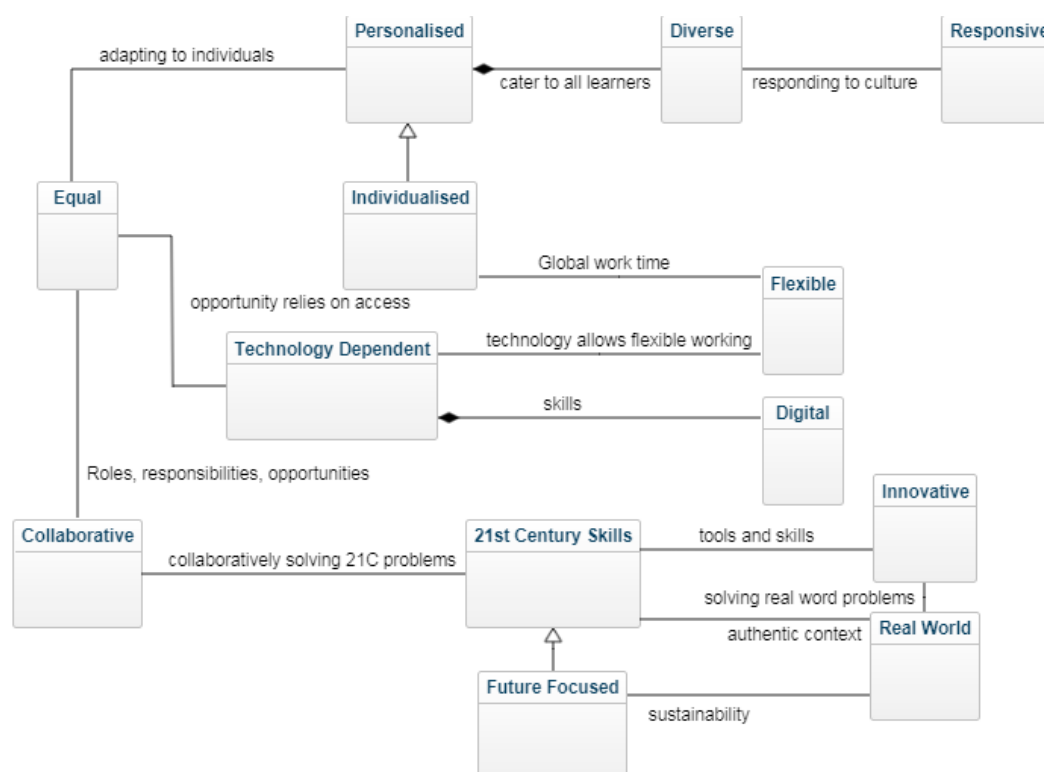
Figure 1: Domain model of future education using UML notation.

It should be noted that this part of the analysis was somewhat subjective, and the same dataset could have been used to generate a number of different domain models by emphasising different relationships. However, this interpretation is one that seeks to reflect the most common and insightful suggestions from the crowd. The domain model produced focuses on three core areas: the individual learner, the role of technology and the contemporary world. These core areas are linked together through concepts of equality and collaboration.

## COMPARING MODELS OF FUTURE EDUCATION

This research project used a crowdsourcing approach to create one indicative model of views on the future of education. This section compares the key concepts in the domain model with three other views of the future of education. There are, of course, many views that could be used for such a comparison. However, in an effort to address a broad range of perspectives, we have chosen to include one national view (from the New Zealand Ministry of Education), one international view (from the Organization of Economic Co-Operation and Development [OECD]), and the other, a bi-cultural view of importance in New Zealand, a Māori perspective from Professor Sir Mason Durie of Massey University. These three documents were used in the analysis as comparisons to the crowdsourced data. In the analysis, we sought to explore whether crowdsourcing provides unique or contrasting views. This was structured in tabular form, using the crowdsourced data as the initial starting point, and then comparing each of the other sources to identify similarities and differences between each perspective (Table 2).

We drew on these three documents in the analysis in the following ways. The document *New Zealand Education in 2025 – Lifelong Learners in a Connected World* (Ministry of Education [MoE], 2012) presents a connected, decentralised vision, with a focus on STEM skills and authentic learning. This provided a national state viewpoint on the future of education. The six OECD schooling scenarios for 2020 (OECD, 2017) are in three categories: the status quo, re-schooling and de-schooling. We confined the analysis of this document to the re-schooling category since it is the

| Category | Crowdsourced data | MoE | OECD re-schooling | Hui Taumata Mātauranga IV |
|---|---|---|---|---|
| The individual learner | Diverse | Diverse | Diverse | |
| | Equal | Inclusive | Equal opportunity | |
| | Individualised | | | |
| | Personalised | | | Personal |
| | Responsive | Empathetic | | Inclusive |
| | | Self-directed | | |
| | | | Non-formal learning | |
| The role of technology | Digital | | | Digital networking |
| | Flexible | | Flexible (facilities) | Connected |
| | Technology-dependent | | Extensive ICT | Virtual classroom |
| | | Open resources | | |
| | | Online profiles | | |
| The contemporary world | Collaborative | Collaborative | | Collaborative |
| | Future-focused | | | Future-focused |
| | Innovative | Innovative | | Flexible |
| | Real-world | Authentic problem-solving | Local decision-making | |
| | Twenty-first century skills | | | Knowledge-building |
| | | STEM foundation | | |
| | | | Shared responsibilities | Flexible |
| | | | New forms of evaluation | |
| The physical environment | | Adaptable, technology-rich | Flexible, state-of-the-art | Centres of excellence |
| | | Learning centres for all ages | School and community | School as community hub |
| | | | | Flexible |
| | | | | Virtual classroom |
| Cultural responsiveness | | | | Cultural concepts and processes |
| | | | | Importance of language |
| | | | | Cultural identity/ confidence |
| | | | | Indigeneity |
| The international context | | | International networks | International currency |
| | | | | International benchmarks |

Table 2: Contrasting visions of future education.

category most concerned with future education emerging from the current system. Finally, the third document was used in the analysis because it anticipates a learning environment for future Māori achievement, as outlined by the fourth Hui Taumata Mātauranga (Durie, 2004). This document asserts that such a learning environment will have dual responsibilities to Māori learners to prepare students to fully participate both in wider society and in te ao Māori (the Māori world).

Table 2 maps the various concerns of these three documents against the main themes that emerged from this project's data in order to see the scope and limitations of the crowdsourcing approach. These have been grouped into the three broad categories identified in the domain model, along with three additional categories (the physical environment, cultural responsiveness and the international context) that were identified in the three other sources analysed.

From the data in Table 2, it appears that the crowdsourced approach provides new insights into the heart of contemporary educational values, freed from infrastructural, political or administrative concerns. One example from the individual learner category suggests employing a crowdsourcing methodology might facilitate the collection of data that is independent of institutional forces (Williams, 2013).

The crowdsourced data on 'individualised' and 'personalised' was not noted in the institutional perspectives of the MoE nor OECD. This may be due to the freer nature of the data collection process at work. There were other significant omissions, this time in the crowdsourcing data where there were no entries in the categories of 'physical environment', 'cultural responsiveness' and 'international context'. It is hard to quantify why these occurred but, returning to Sabou et al. (2012) and their work on crowdsourcing in research, perhaps this was an example of the data being homogenised and differences being occluded? Perhaps, as Williams (2013) alludes to, the crowd may represent the views and associated bias of the general population, and that the lack of crowdsourced data on these categories is a reflection of this? Or it could simply be that they do not occur in significant enough numbers to appear in the most common themes identified in the data set. In essence, this crowdsourced approach captures a set of high-level concepts around educational values that do not occur consistently in the other models analysed.

## CONCLUSIONS

This article has explored the use of crowdsourcing as a research methodology, illustrated with a case study. Crowdsourcing can provide different perspectives and other ways of analysing the same domain of interest, potentially giving a broader set of ideas than are available from other channels, so it may provide a useful complement to more traditional research methods. Crowdsourcing varies in terms of crowd, initiator and process, and has been defined in a number of ways. Further, technical configuration and design of crowdsourcing process can vary widely. Nevertheless, the core concept of crowdsourcing as a research method is clear: outsourcing research tasks to large groups of self-selected people, both lay and expert.

It has some advantages over other research methods, such as gathering data through surveys, partly because of the potentially larger scale but, more importantly, because it allows the participants to open up questions as well as provide answers through a continuous cycle of interaction between previous and current contributions.

We have illustrated these ideas of using crowdsourcing as a research methodology through a case study called Hack Education, that aimed to gather visions of the future of education via a public website that supported interaction between previous and current contributions. As well as crowdsourcing the original data, we also crowdsourced the analysis of the data in two phases. The main concepts derived from this process were compared with three other visions of future education from national, international and cultural perspectives. This comparison suggested that the vision of education gathered from the respondents, and the crowdsourced analysis, provided some unique perspectives on what the future of education might be.

Although the crowdsourced data filtered out some important factors, including cultural, infrastructural and international contexts, it provided further contributions to multiple views of how education will evolve. We therefore conclude that crowdsourcing provides a valuable complementary research tool that can help to triangulate data from other sources. In subsequent work, we have begun to build on these contributions in a project that captures video vignettes of teachers reporting on how they have implemented the crowdsourced concepts in their teaching.

## REFERENCES

Basye, D. (2016). Personalized vs. differentiated vs. individualized learning. Retrieved from https://www.iste.org/explore/articledetail?articleid=124

Brabham, D. C. (2008). Crowdsourcing as a model for problem solving: An introduction and cases. *Convergence: The International Journal of Research into New Media Technologies*, *14*(1), 75-90.

Day, J. (2014). Crowdsourcing vs. surveys: Insight beyond forms and votes. Retrieved from http://researchaccess.com/2014/04/crowdsourcing-vs-surveys/

Durie, M. (2004, September). *Māori achievement: Anticipating the learning environment*. Paper presented at IV Hui Taumata Mātauranga, Taupo, New Zealand.

Estelles-Arolas, E., & Gonzalez-Ladron-de-Guevara, F. (2012). Towards an integrated crowdsourcing definition. *Journal of Information Science, 38*(2), 189-200.

Howe, J. (2006a). The rise of crowdsourcing. *Wired*, *14*(6). Retrieved from http://www.wired.com/wired/archive/14.06/crowds.html

Howe, J. (2006b). Crowdsourcing: Why the power of the crowd is driving the future of business. Retrieved from http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html

Jacobson, I., Booch, G., & Rumbaugh. J. (1999). *The unified software development process*. Reading, MA: Addison Wesley.

Miles, M., Huberman, A., & Saldana. (2014). *Qualitative data analysis: A methods sourcebook*. London: Sage.

Ministry of Education (MoE). (2012). *New Zealand education in 2025: Lifelong learners in a connected world*. Wellington, New Zealand: MoE. Retrieved from https://education.govt.nz/ministry-of-education/specific-initiatives/digital-technologies-for-teaching-and-learning/

Organization for Economic Co-operation and Development (OECD). (2017). *The OECD schooling scenarios in brief*. Paris: Centre for Educational Research and Innovation (CERI), OECD. Retrieved from http://www.oecd.org/innovation/research/centreforeducationalresearchandinnovationceri-theoecdschoolingscenariosinbrief.htm

Paulin, D., & Haythornthwaite, C. (2016). Crowdsourcing the curriculum: Redefining e-learning practices through peer-generated approaches. *The Information Society*, *32*(2), 130-142.

Sabou, M., Bontcheva, K., & Scharl, A. (2012). Crowdsourcing research opportunities: Lessons from natural language processing. In S. Lindstaedt & M. Granitzer (Eds.), *Proceedings of the 12th International Conference on Knowledge Management and Knowledge Technologies* (article 17). New York: Association for Computing Machinery.

Surowiecki, J. (2005). *The wisdom of crowds*. New York: Anchor.

Thuan, N. H., Antunes, P., & Johnstone, D. (2017). A process model for establishing business process crowdsourcing. *Australasian Journal of Information Systems, 21*. Retrieved from http://journal.acs.org.au/index.php/ajis/article/view/1392

Tourle, R. (2017). White noise: Sound, materiality and the crowd in contemporary heritage practice. *International Journal of Heritage Education*, *23*(3), 234-247. Retrieved from http://www.tandfonline.com/doi/full/10.1080/13527258.2016.1261919.

Williams, C. (2013). Crowdsourcing research: A methodology for investigating state crime. *State Crime, 2*(1), 30-51.

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# HOW DOES THE OPTION OF VIDEO ASSESSMENT IMPACT ON STUDENT CHOICE AND GRADES?

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## ABSTRACT

As digital fluency is becoming an educational priority, contemporary educators are increasingly looking at innovative means of assessment to replace or supplement more traditional approaches such as written essays or tests. Learner-generated, video-based assessment allows students to express themselves in different ways, brings the real world into assessment activities, and provides an opportunity to develop new digital and communication skills.

Since 2014, The Mind Lab by Unitec has provided teachers and educators in New Zealand with a different model of professional development. Teachers and educators are able to study part time and complete a Postgraduate Certificate in Applied Practice – Digital and Collaborative Learning at a range of locations across New Zealand. Candidates can elect to work on assignments independently or collaboratively in small groups. In the first two courses candidates complete four assessments, two for each course. Assessment types for these courses include both video presentations and essays. Following anecdotal feedback from candidates about the two different assessment media, it was decided to examine what impact, if any, the medium used for assessment had on candidates' grades.

Although research indicates that video assessment is beneficial, there is minimal research into the impact of choice of media on students' assessment outcomes. Of the four initial assessments, the first is a video, the second, an essay, and for each of the two subsequent assessments students may choose to submit either a video or an essay. We sought to investigate whether the students' choice of medium impacted on their grades, and whether previous grades influenced the medium that students chose for subsequent assessment.

We collected data from assessments of about 680 students over three consecutive intakes of the programme over a period of twelve months (November 2015 to October 2016). The findings indicate that the students' choice of medium did not impact their grades. The choice of medium for the initial assessments also does not have a significant impact on the outcomes of subsequent assessments. The key finding is that students were not disadvantaged as a result of submitting video assessments. This may assist others in supporting and designing innovative means of assessment suitable for their students.

## INTRODUCTION

As digital tools such as video-editing software become more user-friendly and affordable, incorporating digital videos into tertiary education settings, particularly in assessments, has become more common. Learner-generated video assessment offers an alternative to the traditional essay assessment. It offers a range of options such as demonstrating a skill or activity, showing a 'talking head' (a head and shoulders shot of a person talking), containing a screencast or narrated slides, reporting in a journalistic style, or creating stop-motion movies. Specifically it allows students who find writing difficult to express themselves more effectively, brings their future professional practice into assessment activities, and provides an opportunity to develop digital and communication skills such as using video-editing software and writing scripts.

Because we offer the option to submit assignments in essay or video format, we aimed to investigate whether there is any impact on student grades when this option is provided. The value of this research is to ensure that a) students make an informed choice when deciding between video and other assessment formats, and b) there are no negative consequences for students who choose to submit video assignments. As alternative forms of assessment, such as video, become more popular, it will be beneficial to the wider educational community to better understand their impact on student achievement. This study sought to answer the following two research questions: To what extent

does the choice of assessment medium impact on academic grades for students? To what extent do positive or negative grade outcomes impact on students' subsequent choice of medium for assessment?

## LITERATURE REVIEW

The majority of literature on the subject focuses on the benefits of learner-generated video assessment in terms of skills gained and engagement with learning. Greene and Crespi (2012) found tertiary students appreciated video assessment and considered it to be relevant and entertaining. Similarly, a qualitative study of sports management students found that they enjoyed video assessment and that it promoted critical thinking and engagement with theory (Walters, Hallas, Phelps, & Ikeda, 2015). In a study of pre-service teachers, Borowczak and Burrows (2016) also found video assessment promoted critical thinking and increased engagement. Similarly, Pereira, Echeazarra, Sanz-Santamaría and Gutiérrez (2014) concluded that videos provided "a better didactic method to develop both cross-curricular competencies (intrapersonal, interpersonal and instrumental) and curricular specific competencies … than traditional methodologies" (p. 580).

According to Ryan (2013), video production provides students with authentic constructivist learning experiences, creating videos to construct their own knowledge. His research into students producing video to teach concepts to their peers found that the students appreciated the alternative method of learning, stating that they learnt more from creating the videos and "spent much more time researching their individual sections of their video than they would have done for an individual essay" (p. 6). Ryan attributed this to the active learning pedagogy that required the students to apply their knowledge, thus leading to a deeper understanding. He concludes that "motivated students will engage in higher order thinking and will autonomously research, synthesise, analyse, create, edit and ultimately 'produce' their own knowledge. … Empowered students are likely to become engaged students" (2013, pp. 10-11).

There is a gap in the literature about video assessments for educational purposes; little research has been conducted that compares assessment outcomes when students have the *option* to choose to use multimedia resources. Furthermore, there are also considerations and challenges associated with video assessment. Greene and Crespi (2012) report negative feedback from students who were not skilled in using video-editing software. Understandably, challenges or frustration with the tools, which reduce focus on the content, are likely to make the experience less enjoyable for students. According to Kearney and Schuck (2006), it is not only technical issues that students find challenging. In some cases, students indicated that they did not like filming or editing, while others indicated that they did not want "to 'act' in the video" (p. 197).

## METHODOLOGY

### Background to the study

The students who enrolled in the programme (Postgraduate Certificate in Applied Practice –Digital and Collaborative Learning) were working full time as teachers or supporting staff at New Zealand primary and secondary schools, communities of learning, and tertiary institutions. The programme consists of four courses: the first two are delivered in classes; the second two courses, which use a blended learning approach, include online activities such as webinars, online forum, and face-to-face workshops. This paper will focus on the first two courses.

The first two courses, which run in parallel, are Digital and Collaborative Learning in Context (Digital) and Leadership in Digital and Collaborative Learning (Leadership) There are two assessments in each of the courses, which will be referred to in this document as Digital 1, Digital 2, Leadership 1 and Leadership 2.

The students are required to submit the Digital 1 assessment in video format and Leadership 1 as an essay. Subsequent assessments (Digital 2 and Leadership 2) can be submitted as either video or essay (see Table 1).

| Assessment name | Type of assessment format |
|---|---|
| Digital 1 | Video (compulsory) |
| Leadership 1 | Essay (compulsory) |
| Digital 2 | Video or essay |
| Leadership 2 | Video or essay |

Table 1: Types of assessment format.

## DATA COLLECTION AND ANALYSIS METHODS

In this research, quantitative data is drawn from student grades across the four assessments. We looked at the grades of about 680 students from the three intakes, namely November 2015, March 2016 and July 2016. This would help us to find out the impact of the assessments on the total number of students we admitted in a one-year period (November 2015 to October 2016). The quantitative analysis uses simple statistical values such as mean/median averages and histograms and is focused on the aforementioned research questions. The trends of data are visually examined based on the bar graphs and histograms, and inferential statistics analysis is not carried out in this paper.

## RESULTS

The average grades and overall grade distribution (histogram) for each assessment of all the three intakes mentioned above are shown in Figures 1a to 1e. Figure 1a shows the average grades of the video and essay assessment from the four assignments that students must complete in the first 16 weeks. Figures 1b to 1e show the histogram of the grades in each assessment.

The average grades of all the assessments are not significantly different when examined visually. For the Digital 1 and Leadership 1 submissions, the average grades for each choice of media (video, essay) are also similar. The distributions of the grades in each assessment are not significantly different when examined visually, as can be seen in the histograms.
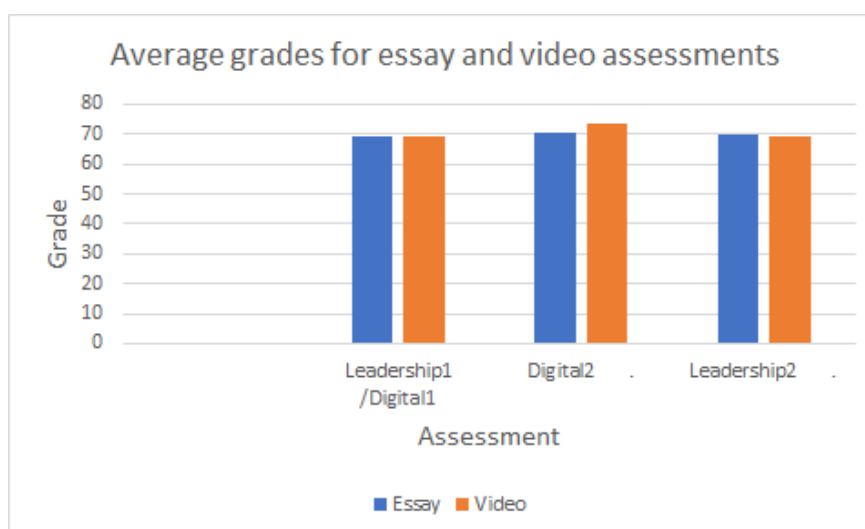


Figure 1a: The average grades of video and essay submissions across four different assessments (video and essay are compulsory for Digital 1 and Leadership 1 respectively).
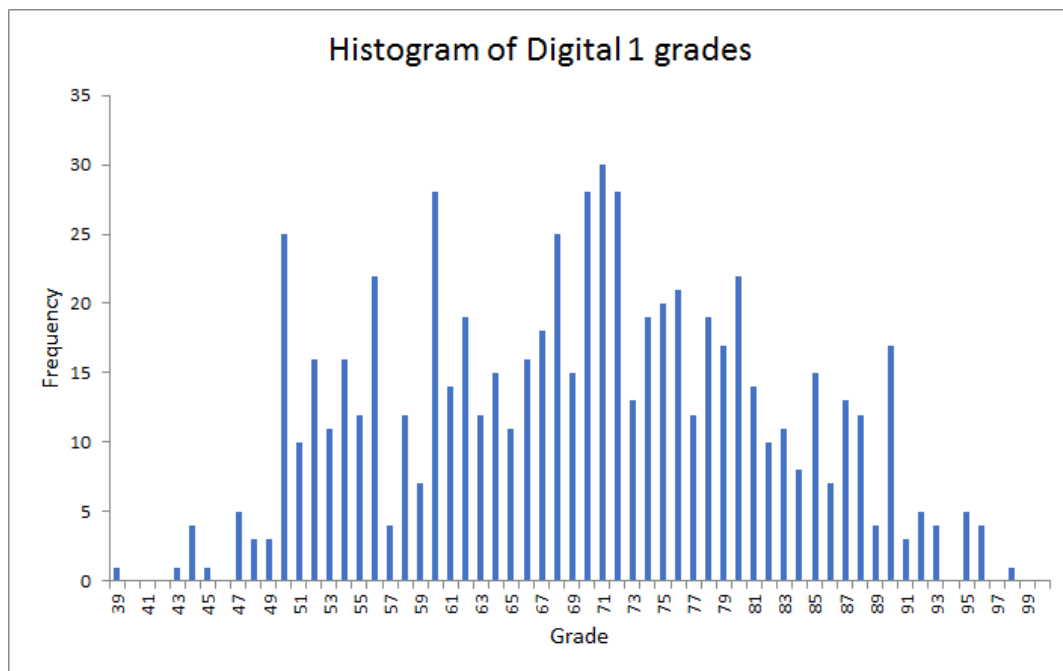
Figure 1b: Histogram of the grades of Digital 1 (the frequency for each value of grade).
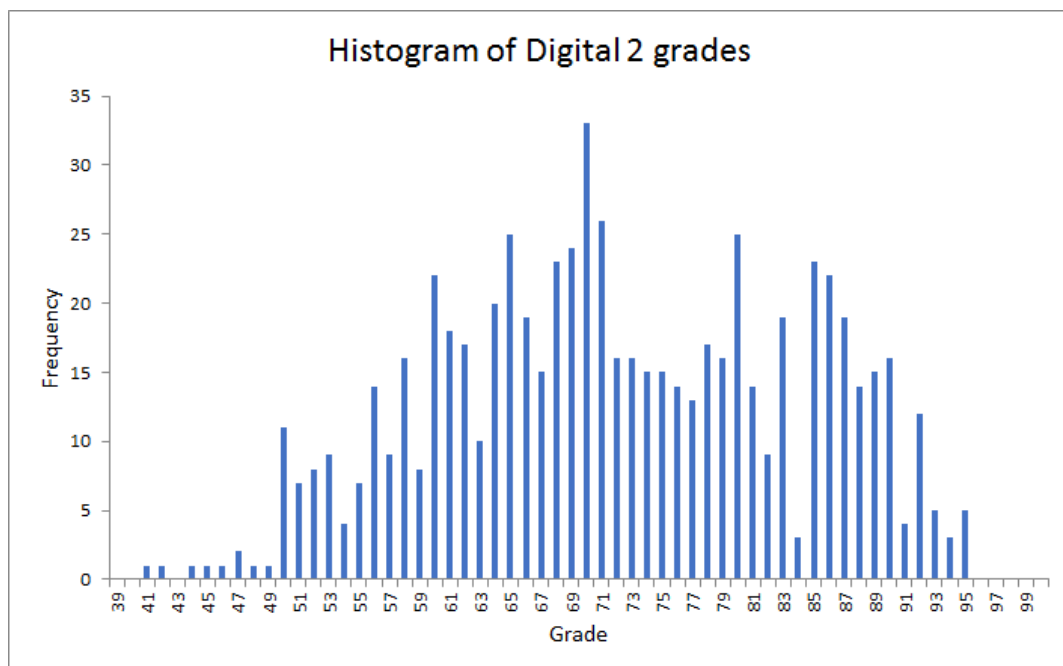


Figure 1c: Histogram of the grades of Digital 2 for both assessments (the frequency for each value of grade).
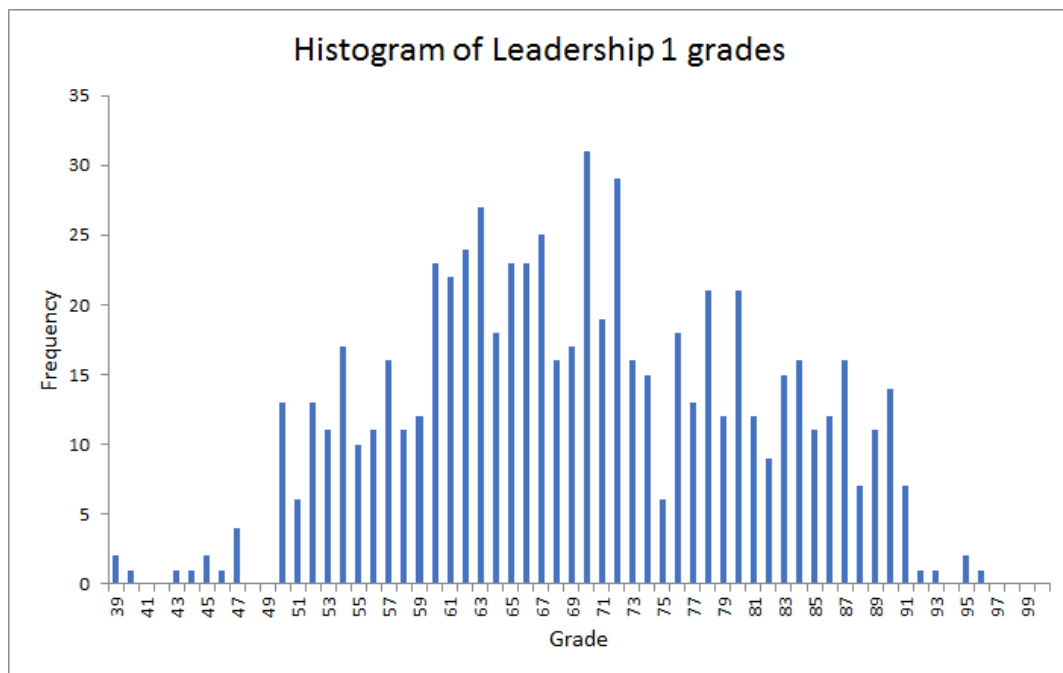
Figure 1d: Histogram of the grades of Leadership 1 (the frequency for each value of grade).
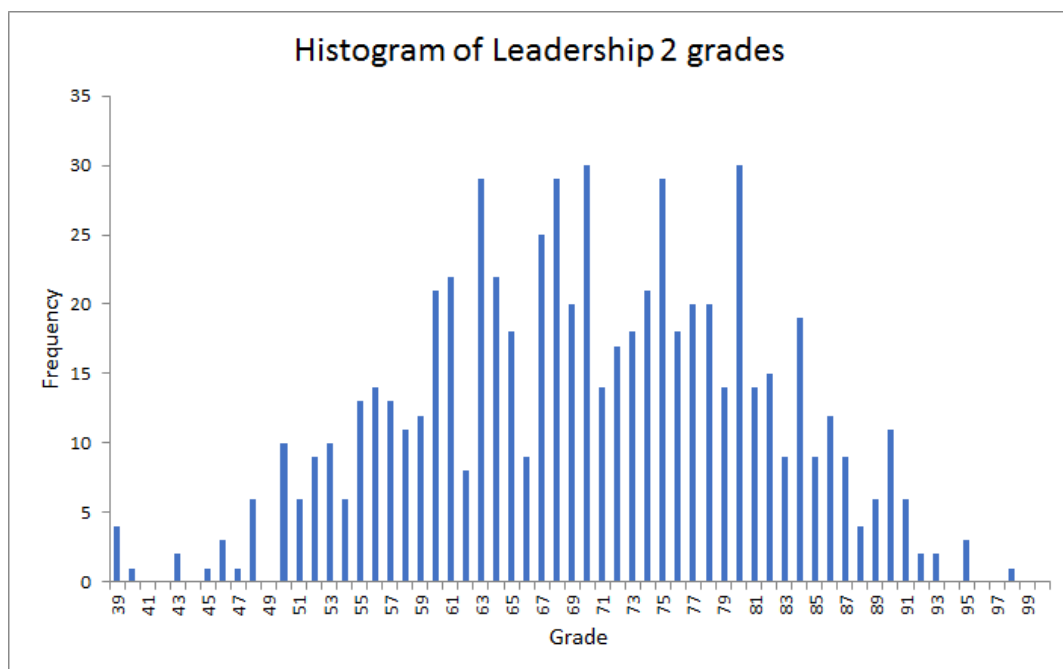


Figure 1e: Histogram of the grades of Leadership 2 for both assessments
(the frequency for each value of grade).
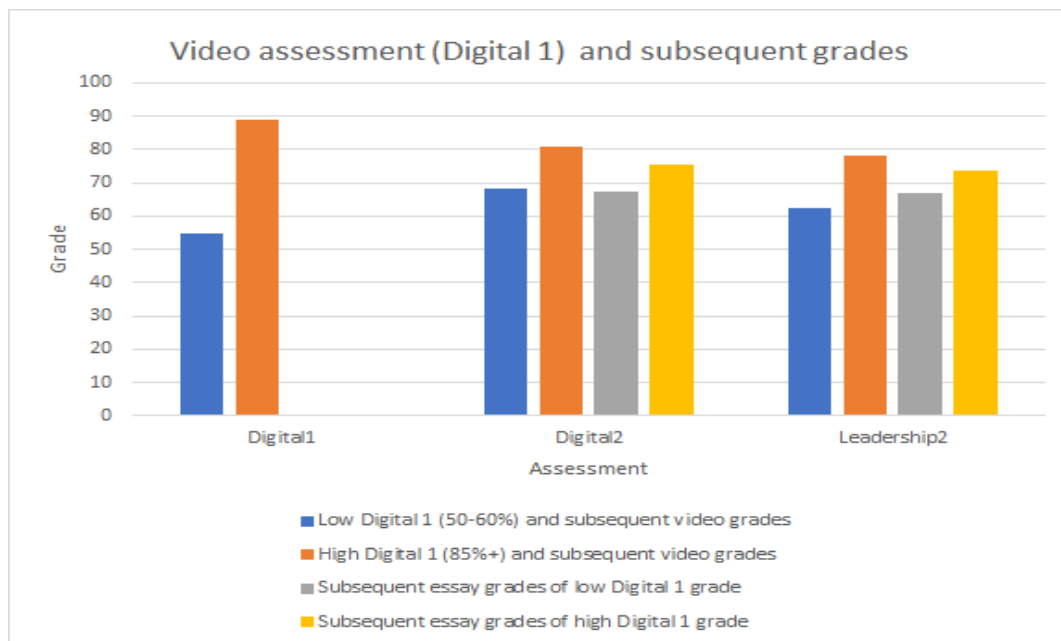
Figure 2: Performance of the groups with high (85%+) and low (50-60%) grades for the first video submission (Digital 1) in the following papers (Digital 2 and Leadership 2).
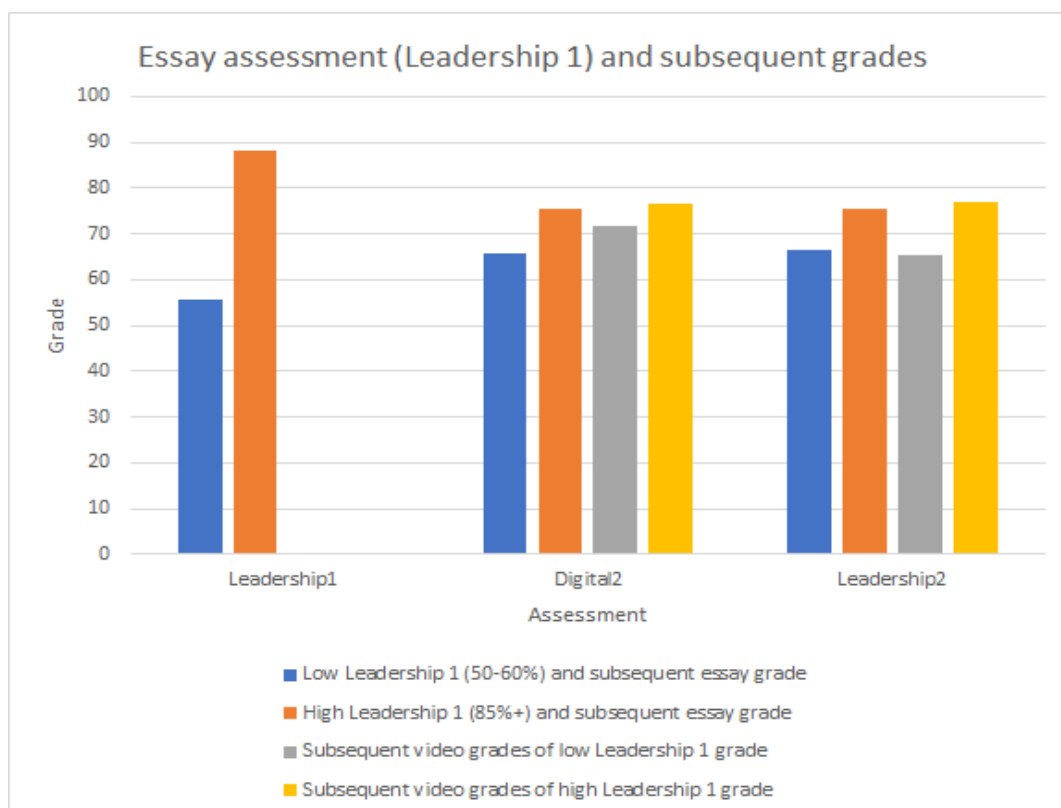


Figure 3: Performance of the groups with high (85%+) and low (50-60%) grades for the first essay submission (Digital 1) in the following papers (Digital 2 and Leadership 2).

Figure 2 looks at how the students with high grades (above 85%) and low grades (50-60%) for the first video submission (Digital 1), performed in their video and essay submissions for the next two assessments (Digital 2 and Leadership 2).

Similarly, Figure 3 shows how the students with high grades (above 85%) and low grades (50-60%) for their first essay submission (Leadership 1) performed in their video and essay submissions for the next two assessments. The average grade of the video submission from the top group in Digital 1 has reduced in the next two assessments. However, the students from this group who submit essays in the subsequent assessments, do not reveal better performance. Those from the bottom group showed improved performance in their next assessment regardless of their choice of media.

Contrary to the observation in Figure 2, students from the group with high grades in Leadership 1 who changed their choice of media from essay to video saw that their average grades were slightly higher in the Digital 2 and Leadership 2 assessments than those of the students still submitting essays, as shown in Figure 3. The same pattern as shown in Figure 2 is observed for those in the group with lower grades for the first essay assessment; their average grades in each of the next two assessments improved regardless of their choice of media.

Figure 4 shows the trend of video submissions across the assessments (Digital 1, Digital 2, and Leadership 2). The numbers are collected from the grade analysis of the three intakes. Figure 5 (below) takes a closer look at the trend among the students in the two groups who scored high (above 85%) and low (50-60%) in the first video submission (Digital 1).



Figure 4: The trend of video submission across different assessments for the three observed intakes.
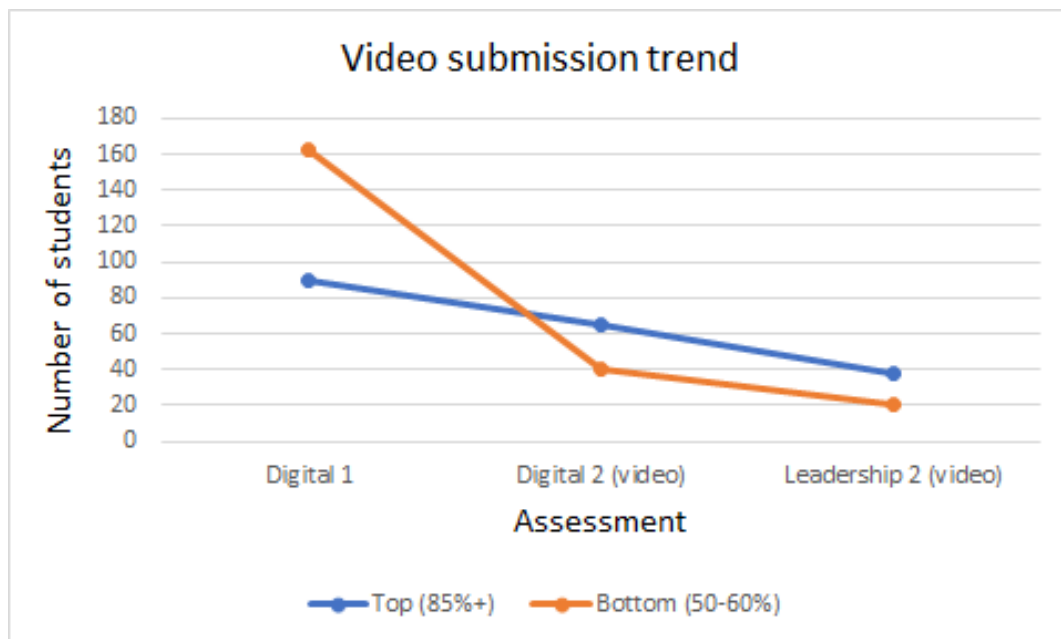
Figure 5: The trend of video submission across different assessments for the two groups with top and bottom grades in Digital 1.

Figures 6 and 7 look at the trend for the video submissions in the total three intakes, and the two groups who received the top and bottom marks for their first essay (Leadership 1).

While the number of students submitting videos for Digital 2 is less than for Digital 1, (due to being given the option to choose the format), the trend continued downward for the next assessment, Leadership 2, as shown in Figure 4. This trend is also observed in Figure 5 although the reduction in video submissions is quite sharp for the group with low grades for Digital 1.
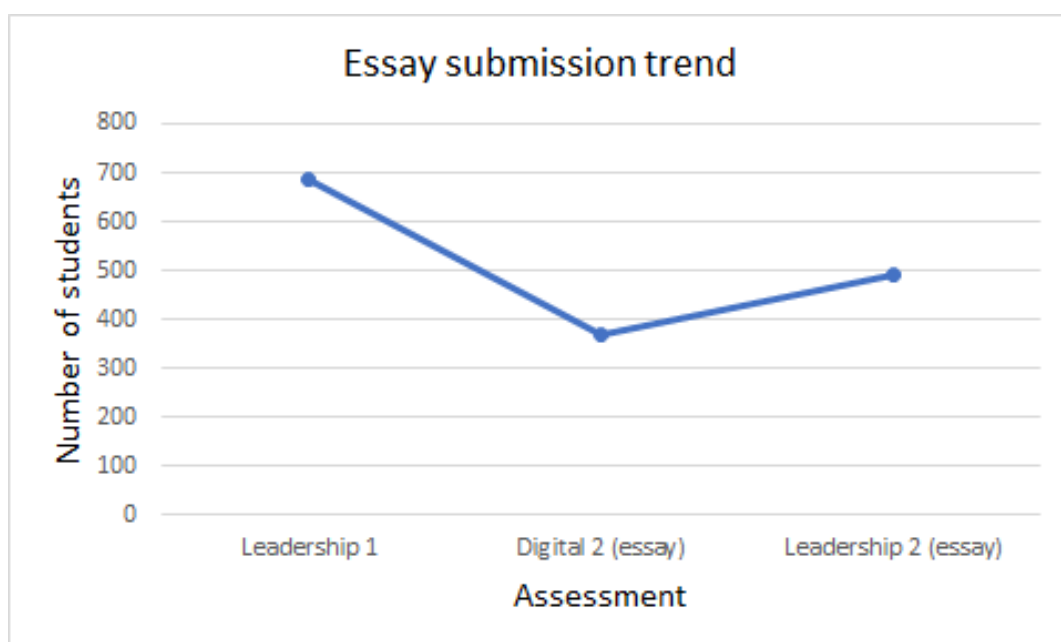


Figure 6: The trend of essay submission across different assessments for the three observed intakes.
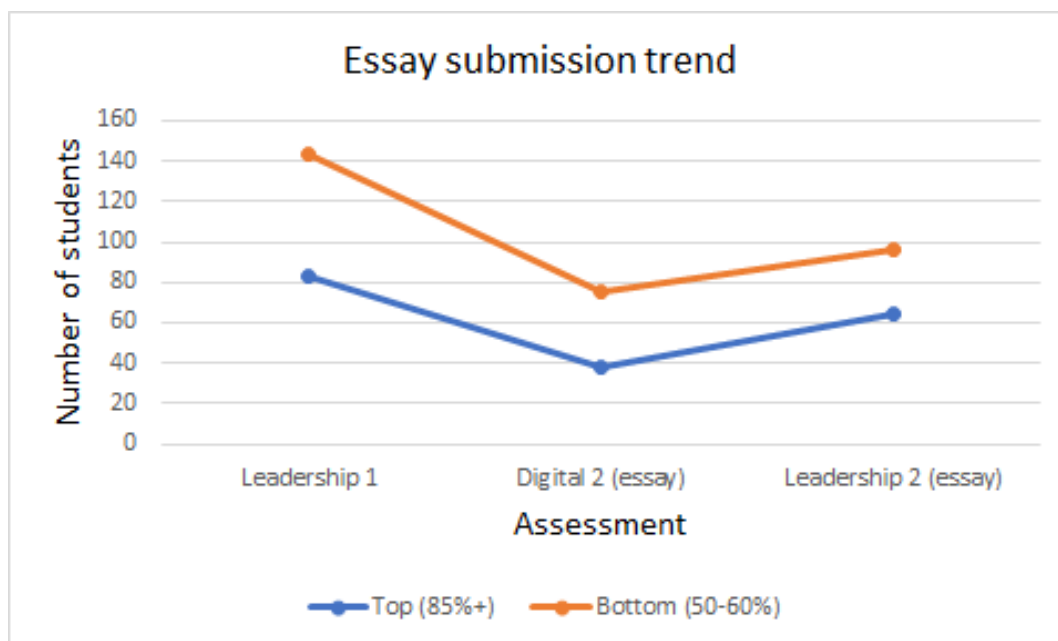
Figure 7: The trend of essay submission across different assessments for the two groups with top and bottom grades in Leadership 1.

Again, the number of essay submissions in Digital 2 is also reduced when they have the choice of media. However, unlike the observation in Figures 4 and 5, the number of essays goes up in the Leadership 2 assessment, as shown in Figures 6 and 7.

## DISCUSSION

### Research question: To what extent does the choice of assessment medium impact on assessment outcomes for students?

The results suggest that whether students choose to make a video or write an essay it does not make a significant difference to their grades, as shown in Figure 1a. The average grades of the first essay and first video submissions are not significantly different from the average grades of the subsequent assessments. The same pattern is also observed in each intake when the average grades for the assessments are compared. The overall grade distribution for each of the assessment is bell shaped, as shown in figures 1b to 1e. Variation of the frequency can be visually observed at a few particular grades in the histograms, however, the overall distribution is not significantly affected. The statistics are drawn from a large number of students (about 680) across the three intakes (November 2015, March 2016, July 2016) in a twelve-month period to provide a large enough sample size to validate the trends or observations.

### Research question: To what extent do positive or negative grade outcomes impact on subsequent student choice of medium for assessments?

The data in Figure 2 shows that students who received a low mark (50-60%) in their first video submission increased their grade in subsequent assessments regardless of the type of media they chose. However, for students who got their top (best) mark in the their first video submission, the grades generally decreased in subsequent assessments.

It is also observed that there is a convergence of the grades (grades increasing for students with initial low marks and decreasing for students with initial high marks over the course of the programme) in the subsequent assessments, regardless of the grades the students received in their Digital 1 and the choice of medium students made for Digital

2 and Leadership 2.The same converging trend is also observed in Figure 3 for the first essay submission and the subsequent assessments (in both video and essay). Further collection of qualitative data would be needed to investigate the reason(s) for these convergences.

The number of students who chose to submit their work as a video kept reducing from the first compulsory video submission (Digital 1) to the third assessment (Leadership 2) as shown in Figure 4. While the decrease is quite linear for the group with a high mark for Digital 1, it is a sharp reduction for the group with a low grade in the respective assessment as shown in Figure 5. The trend is quite different for essay submission. The number of essays consistently increases after Digital 2 for the three groups (total number of students, students with low grades, and the ones with high grades) as shown in Figures 6 and 7.

Results suggest that positive or negative grade outcomes of earlier assessments have no significant impact on subsequent student choice of medium for assessments, or on the respective grades. The grades are consistently converging as the programme proceeds.

## CONCLUSION

The results indicate that choosing to submit a video assessment does not make a difference to students' grades. Further, receiving high or low grades in the first two assessments does not have a significant impact on later grades. However, the number of students choosing to submit videos keeps decreasing after the first video submission, while essay submissions increase.

Our results can reassure students that their choice of medium does not adversely affect their grade, and may encourage more of them to continue submitting video assessments, given the various positive aspects of this type of assessment for students (as indicated in the literature review). The value of this project is two-fold: the scope of the data gathering (good sample size across several intakes in a period of twelve months); and the development of engaging new forms of assessment that allow students to enjoy the acquisition of new academic and professional skills.

Future research could also look at how demographic factors impact the choice of medium for assessments, and explore qualitative responses about the reasons for student choice. It would also be valuable to look into whether the experience of being able to select different media for assessment on the post-graduate course has altered the choices of media they provide for their own students for assessment.

# REFERENCES

Borowczak, M., & Burrows, A. C. (2016). Enabling collaboration and video assessment: Exposing trends in science preservice teachers' assessments. *Contemporary Issues in Technology and Teacher Education*, *16*(2), 127-150.

Greene, H., & Crespi, C. (2012). The value of student created videos in the college classroom: An exploratory study in marketing and accounting. *International Journal of Arts & Sciences*, *5*(1), 273-283.

Kearney, M., & Schuck, S. (2006). Spotlight on authentic learning: Student developed digital video projects. *Australasian Journal of Educational Technology*, *22*(2), 189-208.

Pereira, J., Echeazarra, L., Sanz-Santamaría, S., & Gutiérrez, J. (2014). Student-generated online videos to develop cross-curricular and curricular competencies in nursing studies. *Computers in Human Behavior*, *31*(1), 580-590. Retrieved from https://doi.org/10.1016/j.chb.2013.06.011

Ryan, B. (2013). A walk down the red carpet: Students as producers of digital video-based knowledge. *International Journal of Technology Enhanced Learning*, *5*(1), 24. Retrieved from http://doi.org/10.1504/IJTEL.2013.055950

Walters, S. R., Hallas, J., Phelps, S., & Ikeda, E. (2015). Enhancing the ability of students to engage with theoretical concepts through the creation of learner-generated video assessment. *Sport Management Education Journal*, *9*(2), 102-112.

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# DESIGNING A CHILDREN'S LITERATURE COURSE FOR DIVERSE ADULT LEARNERS:

# CO-CONSTRUCTING LEARNING SPACES THROUGH CREATIVITY

STEPHANIE SHEEHAN

ANNE KAYES

TUI MATELAU

## ABSTRACT

In New Zealand, the New Zealand Qualification Authority's Mandatory Review of Qualifications for levels 1-6 prompted the writing of new courses to be delivered in the New Zealand Certificate in Study and Career Preparation Levels 3 and 4. In the Bridging Education programme in a large urban polytechnic, this provided the opportunity to design a suite of four courses for new-to-tertiary students in the Education Vocational Pathway. The course development team sought to co-construct a space, the Children's Literature course, where our diverse students – in a space between their whānau (family), the world of study and their future careers as teachers – could be at the centre of their own education.

The course aims to widen learners' experience and knowledge of children's literature, to build confidence and literacy. Through research, academic discussion, sharing on social media and creative projects, learners interact with and create a diverse repertoire of nursery rhymes, stories and illustrations to take with them into further study and practica in education settings. The course enables a deeper knowledge of, and interaction with, Māori and Pasifika literature and language, and examines aspects of other cultures present in Aotearoa New Zealand today. The creative projects give our diverse students the opportunity to share their cultural values with their peers and lecturers.

This paper describes the course development and shares some examples of student work and evaluations. High levels of satisfaction, growth in confidence and academic literacy were reported. Important success factors were a strengths-based philosophy, accessible and diverse literature, creative projects and the use of social media. The conclusion suggests future directions for staff and student research.

## INTRODUCTION

The New Zealand Certificate of Study and Career Preparation Level 3 was created following the National Mandatory Review of Qualifications (MRoQ) for Foundation and Bridging Education in New Zealand during 2015. Bridging courses provide academic preparation for students to enter degree-level programmes. In Bridgepoint: Bridging Education, Unitec Institute of Technology, new courses were written adopting the recent Ministry of Education Vocational Pathways model, enhancing 'line of sight' to students' chosen discipline. The new courses were developed to meet with Ministry of Education and Unitec requirements: to embed literacy and numeracy, embed mātauranga Māori and foster twenty-first century skills such as collaboration, problem-solving and creative thinking. In addition, all programmes report on the progression of priority learners: Māori and Pasifika learners, under-25-year-olds and international students.

## LOCAL ENVIRONMENT AND PROJECT DESIGN

To further understand our students, this project began by looking at who they are and what dreams they had for the future. The staff involved in the design of the Children's Literature course also reflected on their own experiences of students' challenges entering tertiary study, of working in bridging education, and of the elements they value which celebrate diversity and creativity. Additionally, they reviewed the literature on children's literature courses in teacher-education programmes. Issues identified as significant drivers for the design of these programmes in the United States offered an interesting counterpoint to our situation in Aotearoa New Zealand.

The student cohort in level 3 is typically diverse in age and ethnicity, and many are priority learners, defined as "groups of students who have been identified as historically not experiencing success in the New Zealand schooling system" (Education Review Office, 2012, p. 4). Priority learners include Māori and Pasifika students, those with special

educational needs, and those from low socio-economic status (SES). Konai Helu Thaman alludes to just one example of the challenges faced by Pasifika students when she describes "how she had to hang her cultural identification and orientation on the trees outside the classroom and 'forget who I was for a while'" (Thaman, 2003, p. 11).

In 2016, all students were surveyed by the Unitec Business Intelligence Capability Centre, in a major quantitative and qualitative project, about their experience of being a student at Unitec. From the 1964 responses, levels 2-4 vocational and pre-degree students said "I want to be doing something that I love", that they are interested in "making positive life changes, being respected and valued by others, earning a 'decent' income, fulfilling their potential, working in a role that that they enjoy and/or will benefit others who have experienced similar set-backs to themselves" (Unitec Institute of Technology, 2016, para. 24). These students have high aspirations, but often low confidence and literacy. The majority in the Education Vocational Pathway hope to become early childhood and primary school teachers.

## DRAWING ON TRANSITION LITERATURE

Unitec lecturers' experience in Bridging Education aligns with Australian first-year experience literature. Bradley et al. wrote that, "Australian research evidence shows the success rate (or tendency to pass their year's subjects) of low SES students is 97% of the pass rates of their medium and high SES peers, and has been stable over the last five years" (Bradley et al., as cited in Wilson, 2012. This is subject to the students' receiving "higher levels of support to succeed" such as mentoring, counselling, academic assistance and financial support (Wilson, 2012). This encouraging data places the responsibility broadly across the institute (on students, and professional and academic staff alike) to ensure that the first year of tertiary studies is engaging and supportive.

In 2006, Lizzio developed the Five Senses of Success framework expressing successful student transition into higher education through five domains: sense of academic culture, sense of connectedness, sense of capability, sense of purpose, and sense of resourcefulness. This strength-based model informed our design philosophy. We aspired to create a learning space that enabled students to stay connected to their own networks while supporting them to learn how to be students, i.e., participating in academic culture, making new pathway connections and forging a sense of connectedness. With intentional course design that is structured to enable early success, and responsive pastoral care that supports students to attend, use support services and submit course work, students can develop a sense of themselves as capable and resourceful learners. With practical experiences in their discipline early in the semester, they grow in academic and professional identity. Their own and their communities' aspirations fuel a sense of purpose that has the potential to enable the contribution of (often under-represented) perspectives.

The Unitec course development and teaching team embraced the opportunity to co-create a first-year experience course, specifically tailored to Aotearoa in Auckland (the largest Polynesian city in the world), and informed by transition best-practice guidelines. The team perceive the students as gifted with broad knowledge and experiences of diverse cultures. They wanted to create a safe space that privileges the students' knowledge and culture, and a course design that invites participation and contribution. The aim was to place these students in the centre of their own learning as artists, researchers and teachers (Jevic & Springgay, 2008), where they could share their identity and cultural taonga (treasures) with their peers, teachers and communities. In this way they could build on their strengths and stay connected to their own cultures as they grow in academic capability in ways that are directly relevant to their professional ambitions.

Children's literature was chosen because at some level it is something most people share. It allows cultural identity to flourish and supports Māori and Pasifika cultures of oral storytelling. The team looked forward to hearing new voices as the students engaged in story and art making. Diversity can create dynamic creativity and, as Robinson claims, "great scientific breakthroughs have almost always come through some form of fierce collaboration among people. … Collaboration, diversity, the exchange of ideas, and building on other people's achievements are at the heart of the creative process" (Robinson, cited in Azzam, 2009, p. 25).

The course designers were also mindful of the need to decolonise education by incorporating indigenous perspectives, ways of knowing and wisdom, with particular regard to the multiple experiences of Pacific peoples (Thaman, 2003). Similarly, it is "essential for Pacific peoples that the creative arts and other forms of cultural production take up what formal educational institutions have marginalised as non-essential in the twenty-first century" (Thaman, cited in Mackley-Crump, 2011, p. 257).

## CHILDREN'S LITERATURE IN TEACHER-EDUCATION PROGRAMMES

There is limited research on the design of children's literature courses in teacher education or bridging settings. Most often, the focus is on 'using children's literature' for an instructive purpose. The most frequent 'use' was to enhance student teachers' cultural competence (Landa & Stephens, 2017; Papola-Ellis, 2016; Smith & Wiese, 2006). This use arose in North America, where ill-prepared novice teachers, (of whom an estimated 87% are Caucasian), were teaching in schools where over 37% of students are "culturally, linguistically, and ethnically different from the dominant U.S. culture" (Escamilla & Nathenson-Mejía, 2003, p. 238). Theoretical frameworks such as Culturally Relevant Pedagogy and Multicultural Education (Deardorff, 2011) are utilised in the following example:

> The instructor selected six non-dominant identity groups that pre-service teachers would likely encounter in their future classrooms, and provided opportunities for students to explore their literary and social contributions to American society as well as the ways in which they have been subjected to marginalization and exploitation. (Landa & Stephens, 2017, p. 58)

Other examples that student teachers in children's literature courses undertook were analysing representation of groups in children's media, identifying stereotypes, historical misinformation and power dynamics that subjugated or dismissed characters from minority groups.

The second-most-frequent use of children's literature for was in teaching linguistic skills to adult students as "children's literature can be effective in teaching linguistic skills such as pronunciation practice and improving language acquisition" (Ho, 2000, p. 259).

In contrast, Unitec's students are treated as experts. Rather than designing an intervention or programme for tertiary students that is didactic in nature, the design team's perspective is that the students come with a kete (basket) of knowledge, including tales, rhymes, songs and images, from which everyone benefits when explored and shared. This engagement is inherently reciprocal and enriching (Freeman, Feeney, & Moravcik, 2011). While the students discover that "children's literature offers a rich source of information on culture, history and social issues" (Landa & Stephens, 2017, p. 58), the impetus is enjoyment, sharing, entertainment, beauty, fantasy, fun and wisdom. Landa and Stephens, Ho, and Smith and Wiese all concur on the potential of children's literature for enrichment, but perhaps arrive at this similar place through different means.

## DEVELOPMENT OF THE CHILDREN'S LITERATURE COURSE

The New Zealand Early Childhood Curriculum Te Whāriki is a key document for the Education Vocational Pathway and offers guiding principles. The Unitec team sought to express the core principles of *whakamana* (empowerment), *kotahitanga* (holistic development), *whānau tangata* (family and community), *ngā hononga* (relationships) and language through the course. In their relationships they aspire to live in *mahi kotahitanga* (cooperation) and *ngākau mahaki* (respect) with their students and fellow colleagues. They demonstrate this through welcome and hospitality to the students and their *whānau* (family), believing that what the students experience may be as influential as what they are taught. The team are ever mindful to uphold the "essential values of the heart without which knowledge, power and action lose their meaning and purpose" (Charter of the Communities of L'Arche, 1993, p. 3).

The Children's Literature course was designed as one course within a suite of four complementary courses in the Education Pathway. The learning outcomes are as follows:

1. 1. Identify and examine a range of genres and approaches employed in developing oral, visual and written texts for children.
2. 2. Determine how to select children's literature representative of Māori and other particular cultures or ethnic groups.
3. 3. Apply knowledge of a particular children's literary form in the production of a creative or academic work.
4. 4. Communicate clearly using academic conventions and present findings to an audience.

The design of the Children's Literature course is threefold: three modules in which there are three assessment tasks. The first module focuses on rhymes: nursery rhymes, finger-plays, hopscotch and skipping rhymes, oral calls, chants and lullabies. The second focuses on stories: traditional and modern storytelling, folk and fairy tales, both oral and written. The third focuses on art: illustration and image-making in children's books.

Of the three assessment tasks, the first prompts wide reading/listening/viewing with rhymes, stories or illustrations collated on a virtual shared space (the visual media platform Pinterest). Students were invited to pin (post) on Pinterest because it is familiar and easy to use – social media is a learning space they habitually inhabit, it facilitates collecting and sharing with peers and whānau, and in its somewhat addictive capacity fosters the habit of frequent engagement with literature. Another reason for using an online curation site is because engaging with the online environment is associated with success in first-year tertiary study (Kift, 2010; Lorimer et al., 2016).

The second assessment prompts close reading of the text, using a series of investigations into the history, setting, style, language features, media and techniques of a few chosen works. Lastly is the creative project, which for 'rhymes' is a performance, for 'stories' the writing of an original story, and for 'art' the creation of illustrations for the student's own story.

The course developers hoped that the students might also develop a love for children's literature in all its forms. Drawing on the work of Fink (2013), the developers engaged in backwards design. The developers wanted the students to start with their own *taonga* (treasures) and to dive into literature, beginning with their own knowledge and ways of knowing. They were invited to share their rhymes and stories, to remember, to ask and listen to the chants and stories of their *whānau* (family) and to read widely. Because the course developers wanted the focus to be on immersion in literature, marks were weighted towards wide exploration.

In the 15-week course, each of the three modules ran for a month. Students were encouraged to pin (post) their findings daily on Pinterest. The rubric specified marks for quantity of posts (an A grade averaged one a day for a month); variety of posts (including different genres, from different times, places, cultures and languages); and captioning each post with a brief personal reflection. Insight, critical thinking, inter-textual comment or comparison to one's own traditions were rewarded with higher marks.

For students who are often highly visually literate but less confident verbally, children's literature can provide an accessible entry into critical analysis and academic skill development. In the second task in each module, students explore their literature finds by investigating different literary features – for example, in week one, the history, in week two, the language. The lecturer facilitates and models the process by researching the different origins of nursery rhymes, comparing and discussing them, and discerning the credibility of sources. Some students find articulating their opinion difficult, sometimes because it has not been part of their upbringing or prior schooling. Finding their voice in critical reflection and creative work is a significant learning outcome.

The third assessment task is the creative product. Students need to work in pairs, or a small group, to choose, prepare, rehearse and perform two chosen rhymes. The requirement of a group task early in the semester is intentional, as relationships with peers is a significant predictor of retention in first-year students (Wilson et al., 2011). Also, the occasion is relevant to their discipline in that students are publicly in the role of a teacher. Another predictor of success is a sense of purpose and relevance to one's chosen career (Lizzio, Wilson, & Simons, 2002). The performance is an occasion of singing, dancing and speaking that further widens knowledge and experience of rhymes, and showcases the cultural treasures of Unitec's diverse students. Each group performs two rhymes, the first in full performance mode

Figure 1: Module 1 – Creative performance of a nursery rhyme: Interactive teaching to an audience.(Source: Kayes, 2017)

and the second as an interactive teaching occasion. This process and occasion acknowledges Brown's philosophy that, "genealogy and spiritual influences are important, and opportunities need to be provided for these values to be expressed through mediums such as art, song or dance" (Brown, cited in Mackley-Crump, 2011, p. 258). Students sourced their rhymes from their traditions, churches, childhood experiences, books and the internet.

For the second creative project, the writing of a story, students are free to choose any subject but are encouraged to draw on their own family and cultural stories. Before they start writing, they have read widely and closely. One approach is to rewrite a traditional story but in the student's current place and time. Again, marks are weighted towards process and exploration, drafting and crafting their story.

The story then becomes the source of the illustrations for the third creative project. Students view a vast range of picture book art from classic sources to diverse cultures, contemporary and local texts. Responses focus on visual literacy and using academic conventions to express their ideas. Piaget's and Vygotsky's emphasis on the value and dignity of play (Halpenny & Pettersen, 2013) informs the wide experimentation required in media and techniques. Marks are weighted toward the exploration evident in the student's visual diaries over the final two products.

## RESULTS, FINDINGS AND DISCUSSION

The submissions the students present are a delight: zany, fantastical, funny, topical and heroic. One such example is based on a student's actual family history. In Aotearoa New Zealand, the unlawful appropriation of Māori land

during the settler days is an ongoing area of debate, grievance and resolution. Using strong simple language, this student's story depicted a child in contemporary time and local place using the democratic process to stop an ugly development and restore precious family land. The story's significance is its authenticity and connection with the deep values and history of the student's family. The spirit of efficacy and agency the child in the story portrays is powerful, as are the everyday images of hasty urban development. When students are given the respect, time, place and resources to tell their own stories, the results are a form of creative leadership and are worthy of a wider audience. These students become practising artists, researchers and teachers (Burke & Cutter-Mackenzie, 2009.)

Students rated their learning as highly aligned to the learning outcomes (see Appendix B), and evaluations of the course were very positive. Questionnaires (see Appendix A) were done in class on the last day of each module and approximately 70% of students completed them. Additionally, there was a check-in evaluation in week three to see how students were settling in and to identify any questions they might have, and a whole-course evaluation at the end of the course. The main themes from the check-in were that students were enjoying the class and that they liked the "friendly/supportive/welcoming" atmosphere. The few questions raised by students focused on wanting particular information about assessments.

To analyse evaluation data, the development team studied the student evaluations by topic module and assessment type, and student grades for each assessment type.

Students commented favourably on all modules; the nursery rhyme module received the greatest number of positive comments. What students valued most in the module was enjoyment of the rhymes and interest in their origins, becoming a group and performing in front of the class. Typical feedback in regard to valued aspects was: "Learning the origins of nursery rhymes was something I found really interesting" and "Performance of the nursery rhymes because I got to build up my confidence as in the past I wasn't that good with performing in front of the people I don't know". (See Appendix C for samples of student comments.)

Of the three assessment types – the reading log collated on Pinterest, the close reading in the text responses and the creative product (for the performance, story, illustrations) – the creative product received the highest number of positive student comments. What students valued about the creative product was "being creative, using my own ideas, writing my own story". They valued learning about the process, planning and rehearsing a performance, structuring a story and exploring media. Students valued "Writing a children's story because I enjoyed having my own characters", and "Exploring different uses of colours and drawing styles to illustrate my own story".

The assessment type that the students commented on as being the most challenging was the text responses. For example, "My favourite part is writing text responses even though it was a challeng[e]", and "I found writing the text responses hard because English is not my first language but I want to improve my writing". Having fewer text responses was the most-suggested improvement. As a result, the development team will trial fewer text responses next semester and again seek student feedback.

Students gained consistently high grades on the first assessment task, the reading log collated on Pinterest. Students described it as 'fun', for example: "Pinterest! Because it is super easy and gave me flashbacks to my childhood stories". The development team attribute this to the accessible, interesting nature of the material, the familiarity of the media and the small-stakes nature of the assessment.

The assessment in which students showed greatest improvement was the text responses. The team attribute this to the staged nature of the tasks, the formative feedback after each submission and summative feedback after each module.

When we looked at all the feedback, some themes emerged: the value of creativity, challenge and social media as a research tool. Students valued the opportunity to be creative. Their work was diverse. Some drew on personal histories and produced work that was authentically connected to those of their people. They commented on how they enjoyed reconnecting with stories and rhymes from their childhoods.

Students also valued the challenge in tasks such as the close readings and the performance. Although it was effortful, they commented on the confidence they felt they gained in accomplishing the task. They said they thought the close reading had improved their reading and writing skills, and ability to give their opinion. In the performance, the efforts involved in working in a (diverse) group to produce a performance helped them get to know the other students and conquer their fears of public speaking.

Students endorsed the usefulness of an online social-media platform (Pinterest) in fostering wide reading, viewing and listening. Its ease of use helped hook students into frequent sourcing and collating of literature. Its accessibility contributed to students experiencing success early in the course.

An insight from our students was the high level of engagement in the creative work, especially when it was connected to their personal history and culture. The recollecting of childhood and self-reflection was meaningful as they grew in their identity as students. The reduction in the number of text responses was in part to allow for more time for the creative work students so valued. Our emphasis has been on fostering student-to-student and student-to-teacher interactions. The strength of the students' response reminds us of the importance of student-to-self interactions in creative work, the work of being students and ultimately, artists, researchers and teachers.

Limitations in this study are that the number of participants was small (22), and the course has only run for one semester.

## CONCLUSION AND IMPLICATIONS FOR PRACTICE

Greene suggests that the "purpose of education is to free persons to make sense of their actual lived situations – not only cognitively but also perceptually, imaginatively, affectively" (2001, p. 206).

Course development is a cyclic process and student responses are essential to development in all future initiatives. Designing the course using transition best-practice guidelines and the Ministry of Education's Te Whāriki as an underpinning resource has proven fruitful. Based on evaluation feedback, students endorse the basic structure and content of the course.

Students found the rhymes, stories and art highly engaging and accessible as projects. Attendance and success was very high. The strengths-based approach of valuing the diverse cultural capital brought by the students resulted in rich outputs, and including creative products and performances as coursework fostered collaboration and growth in confidence. The use of Pinterest as a research tool was endorsed by students, and contributed to high rates of participation and low-stakes early success.

The development team envisioned a course where students were at the centre of their learning in the co-creation of the Children's Literature course. Students were treated as experts of their own childhood and cultural stories, and in the pace of their learning, as in the rebalancing of academic demands to allow more time for the creative process. Creative self-reflection, through a sense of connection to forebears, helped strengthen students' sense of purpose and sense of capability (Lizzio, 2006).

As a development and teaching team, the collaboration has been professionally stimulating and enjoyable. The team has learned much from the students and this raises the question of how they can support dissemination of students' work. Additionally, the team finds itself in a community of practice, engaging instinctively in the spiral of inquiry (Timperley, Kaser, & Halbert, 2014) but this impact can be either positive or negative. Its power is frequently mentioned in articles about learning and teaching, but surprisingly few recent studies have systematically investigated its meaning. This article provides a conceptual analysis of feedback and reviews the evidence related to its impact on learning and achievement. This evidence shows that although feedback is among the major influences, the type of feedback and the way it is given can be differentially effective. A model of feedback is then proposed that identifies the particular properties and circumstances that make it effective, and some typically thorny issues are discussed, including the timing of feedback and the effects of positive and negative feedback. Finally, this analysis is used to suggest ways in

which feedback can be used to enhance its effectiveness in classrooms. (PsycINFO Database Record (c. Realising this affords the opportunity to pursue this cycle more intentionally, both for the benefit of the development team and of future students.

## REFERENCES

Azzam, A. M. (2009). Why creativity now? A conversation with Sir Ken Robinson. *Teaching for the 21st Century*, *67*(1), 22-26. Retrieved from http://www.ascd.org/publications/educational_leadership/sept09/vol67/num01

Burke, G., & Cutter-Mackenzie, A. (2009). What's there, what if, what then, and what can we do? An immersive and embodied experience of environment and place through children's literature. *Environmental Education Research*, *16*(3-4), 311-330. Retrieved from https://doi.org/10.1080/13504621003715361

L'Arche Cape Breton. (1993). *Charter of the communities of L'Arche.* Cape Breton, Canada: General Assembly of the Federation of L'Arche. Retrieved from http://www.larchecapebreton.org/media/pdf/charter.pdf

Deardorff, D. K. (2011). Assessing intercultural competence. *New Directions For Institutional Research*, 2011(149), 65-79. Retrieved from https://doi.org/10.1002/ir.381

Education Review Office. (2012). *Evaluation at a glance: Priority learners in New Zealand schools.* Wellington, New Zealand: Author. Retrieved from http://www.ero.govt.nz/assets/Uploads/Evaluation-at-a-Glance-Priority-Learners-in-New-Zealand-Schools-August-2012.pdf

Escamilla, K., & Nathenson-Mejía, S. (2003). Preparing culturally responsive teachers: Using Latino children's literature in teacher education. *Equity & Excellence in Education*, *36,* 238-248. Retrieved from https://doi.org/10.1080/10665680390246275

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses*. Hoboken, NJ: Wiley.

Freeman, N., Feeney, S., & Moravcik, E. (2011). Enjoying a good story: Why we use children's literature when teaching adults. *Early Childhood Education Journal*, *39*, 1-5. Retrieved from https://doi.org/10.1007/s10643-010-0439-4

Greene, M. (2001). The creative spirit: Keys, doors and possibilities (Address to the New York State Board of Regents, 1984). In *Variations on a blue guitar: The Lincoln Center Institute lectures on aesthetic education* (pp. 201-208). New York: Teachers College Press.

Halpenny, A., & Pettersen, J. (2013). *Introducing Piaget: A guide for practitioners and students in early years education*. Retrieved from http://ebookcentral.proquest.com

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81-112. Retrieved from https://doi.org/10.3102/003465430298487

Ho, L. (2000). Children's literature in adult education. *Children's Literature in Education*, *31*(4), 259-271.

Jevic, L., & Springgay, S. (2008). A/r/tography as an ethics of embodiment: Visual journals in preservice education. *Qualitative Inquiry*, *14*(1), 67-89. Retrieved from https://doi.org/10.1177/1077800407304509

Kift, S. (2010). *Articulating a Transition Pedagogy to scaffold and enhance the first year student learning experience in Australian higher education*. Queensland, Australia: Queensland University of Technology. Retrieved from http://transitionpedagogy.com/wp-content/uploads/2014/03/Kift-Sally-ALTC-Senior-Fellowship-Report-Sep-092.pdf

Landa, M. S., & Stephens, G. (2017). Promoting cultural competence in preservice teacher education through children's literature: An exemplary case study. *Issues in Teacher Education*, *26*(1), 53-71. Retrieved from http://content.ebscohost.com.

Lizzio, A., Wilson, K., & Simons, R. (2002). University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice. *Studies in Higher Education*, *27*(1), 37-41. https://doi/10.1080/0307507012009935

Lizzio, A. (2006). *Designing an orientation and transition strategy for commencing students: A conceptual summary of research and practice.* Queensland, Australia*:* Griffith University. Retrieved from https://www.griffith.edu.

au/__data/assets/pdf_file/0008/51875/Alfs-5-Senors-Paper-FYE-Project,-2006.pdf

Lorimer, N., Hurst, N., Rowe, C., & Patston, L. (2016, October). Creating connections between theory and practice for diverse learners. Paper presented at the National Tertiary Teaching and Learning Conference, Rotorua, New Zealand. Retrieved from https://www.waiariki.ac.nz/__data/assets/pdf_file/0016/111490/Research-NTLT-Conference-Proceedings-2016.pdf#page=36

Mackley-Crump, J. (2011). Malaga – The Journey: The performing arts as motivational tool for Pasifika students in Aotearoa New Zealand. *The Asia Pacific Journal of Anthropology*, *12*(3), 255–273. Retreived from https://doi.org/10.1080/14442213.2011.566573

Papola-Ellis, A. (2016). "It's just too sad!": Teacher candidates' emotional resistance to picture books. *Reading Horizons*, *55*(2), 1-26. Retrieved from http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=3258&context=reading_horizons

Smith, J., & Wiese, P. (2006). Authenticating children's literature: Raising cultural awareness with an inquiry-based project in a teacher education course. *Teacher Education Quarterly*, *Spring*, 69-87. Retrieved from http://content.ebscohost.com.libproxy.unitec.ac.nz/ContentServer.asp?T=P&P=AN&K=20439809&S=R&D=ehh&EbscoContent=dGJyMMvl7ESeqLI4yOvqOLCmr0%2BeprRSsqq4SrSWxWXS&ContentCustomer=dGJyMPPk54zj2bmF39%2FsU%2BPe7Yvy

Thaman, K. (2003) Decolonizing Pacific Studies: Indigenous perspectives, knowledge, and wisdom in higher education. *The Contemporary Pacific*, *15*(1), 1-17. https://doi.org/10.1353/cp.2003.0032

Timperley, H., Kaser, L., & Halbert, J. (2014). A framework for transforming learning in schools: Innovation and the spiral of inquiry. *Centre for Strategic Education Seminar Series 234*. Retrieved from https://educationcouncil.org.nz/sites/default/files/49. Spiral of Inquiry Paper - Timperley Kaser Halbert.pdf

Unitec Institute of Technology. (2016). *U matter project report*. Auckland, New Zealand: Unitec. Retrieved from http://media.nzherald.co.nz/webcontent/document/pdf/201720/Prevalence%20Tables%20Press%20Release%20May%202017.

Wilson, K. (2012, February). Diversity and engagement in the first year experience. Presentation at SHS Kick Start event, Faculty of Social and Health Sciences, Unitec Institute of Technology, Auckland, New Zealand.

Wilson, K., Lizzio, A., Buys, N., Cowley, K., Lindsay, K., Allison, K., … & Vervoort, S. (2011). *Facilitating commencing students' success with early assessment*. Australian Learning and Teaching Council: Newcastle, Australia.

Example of a student evaluation form for a module for Children's Literature:

## Children's Literature

### Module 2 – Stories for Children evaluation

| | | | |
|---|---|---|---|
| Reading so many children's stories helped me to understand the module better | Yes | Sort of | No |
| Reading so many children's stories helped improve my reading | Yes | Sort of | No |
| Writing text responses helped improve my ability to read critically | Yes | Sort of | No |
| Writing text responses helped improve my ability to write academically | Yes | Sort of | No |
| Writing a children's story helped me to understand them better | Yes | Sort of | No |
| Writing a children's story built up my confidence in writing | Yes | Sort of | No |
| Writing a children's story helped me to build up my confidence working with children | Yes | Sort of | No |

What was your favourite part of Module 2? Why?

_____

_____

_____

_____

_____

What would you change/improve about Module 2? Why?

_____

_____

# APPENDIX B

Tables showing results of student evaluations of each module and whole course:

## After Module 1 students feel able to:

| Category | Yes | Sort of | No | No Answer |
|---|---|---|---|---|
| Find a range of nursery rhymes | 15 | 0 | | |
| Analyse nursery rhymes | 13 | 2 | | |
| Choose suitable texts for diverse groups | 14 | 1 | | |
| Perform nursery rhymes to engage children | 13 | 2 | | |

## After Module 2 students feel able to:

| Category | Yes | Sort of | No | No Answer |
|---|---|---|---|---|
| Find a range of stories for children | 13 | 2 | | |
| Analyse stories for children | 12 | 3 | | |
| Choose suitable texts for diverse groups | 15 | 0 | | |
| Write a story that can engage children | 10 | 5 | | |

After Module 3 students feel able to:



After the whole course students feel they have:

## APPENDIX C

Table showing examples of student responses (from 59 comments):

| I enjoyed | |
|---|---|
| Learning the origins of nursery rhymes was something I found really interesting. | Writing my own story because I enjoy creative writing and children, it was really good to put it all together. |
| My favourite part was the text response, learning how to give my own opinion. | Writing my own story because I love being creative and using my own ideas. |
| Exploring different uses of colours and drawing style to illustrate my own story. | My favourite part of Module 1 was the performance part because I like working as a team because you get to understand what you're doing more. |
| Learning about a range of different literature and how to analyse it more. | Performance of the nursery rhymes because I got to build up my confidence as in the past I wasn't that good with performing in front of the people I don't know. |

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# LOOKS LIKE A CLASSROOM TO US

## JOHN STANSFIELD

## ABSTRACT

Neoliberal ideologies, with their emphasis on the rule of markets, and community development, which promotes ground-up collective social change and human rights, stand in stark contrast to each other. In a social practice school, teaching tomorrow's social change-makers the theory and practice of community development, we experiment with what authentic out-of-classroom learning experiences might be – by, for example, engaging students in a union picket, a protest march and a policy breakfast – and reflect together on how these might inform a deeper discussion of community development using a Freirean lens. The risks, logistics and outcomes of this work-based learning are explored as well as the potential for this innovation to illuminate further the paradox of educating change-makers in a neoliberal institution.

## INTRODUCTION

"Looks like a classroom to us" is the strap line in a Unitec advertising campaign which promotes the institute as a provider of unconventional and industry-relevant education. The campaign promotes Unitec's marae wharenui as an invitation to discuss the importance of architectural history, and the waves at Piha Beach as an ideal place for learning exercise physiology, the surfboard the perfect tool to learn it with.

In the Bachelor of Social Practice (BSP), a registerable qualification in social work and community development, students embark on almost 1000 hours of work-based practical learning in social work and community development agencies. Aside from this, opportunities to learn outside the classroom can be more difficult to manage.

In this paper I discuss three case studies of students from the programme engaging in social action: a union picket, a protest march, and a policy breakfast all 'look like a classroom to us'. Creating relevant, real-life learning experiences for these students and future social change-makers can be fraught with risk, hard to control and potentially hard to resource. The risks, logistics, and outcomes of these three case studies are explored and critically evaluated using Freirean pedagogy.

The central premise of Paulo Freire's body of work is that no education is neutral – it can be used for domestication or liberation. Fundamental to Freire's educational philosophy is the notion of collective action and continuing struggle on the part of the oppressed to liberate themselves from all forms of domination. The oppressed are active subjects in their own struggle.

The understanding gained from this research will be valuable for those challenged by creating authentic learning opportunities for change-makers, particularly in a contemporary, marketised, privatised and globalised or neoliberal tertiary environment (Giroux, 2002; Olssen & Peters, 2005; Apple, 2006; Lakes & Carter, 2011).

Work-based learning has become a significant priority strategy for tertiary institutes (Benefer, 2007). At Unitec, this is reflected in a promise of relevance with the institute working closely with industry to ensure it stays relevant to their changing needs and workforce requirements. (Unitec, 2017).

I teach in Social Practice on an undergraduate social work programme which often finds itself at odds with institutional hierarchy. To begin with, the discipline of social work itself is disruptive: it seeks to change the balance of power in favour of the powerless, and such intervention is not always appreciated by the powerful. The International Federation of Social Work (IFSW) presents a definition of its work which should strike fear into the hearts of those who would order our society along market lines with a neo-liberal reductionism that values all life in transactional terms:

> Social work is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective

responsibility and respect for diversities are central to social work. Underpinned by theories of social work, social sciences, humanities and indigenous knowledge, social work engages people and structures to address life challenges and enhance wellbeing. (IFSW, 2014, para. 1)

If we are to educate social workers we must equip our graduates to recognise the flaws in our social order, and to challenge and overturn that order. We are educating social change-makers who need skills in policy analysis and public advocacy. Activism is one method of policy advocacy which has a long history in social work, and social work education is likely to increase graduates' commitment to activism (Mizrahi & Dodd, 2013). Ricketts defines activism in the following way:

Activism is also a very broad term which refers to actions and activities intentionally designed to exert influence within democratic processes. In this sense we could see democracy as the process and activism as the specific actions and activities taking place as part of that process. (Ricketts, 2012, p. 7)

This activist strand of the work is often strongest and most consistent in the community development approach (Plant, 1974). A community development approach is a rights-based, bottom-up practice to identify and achieve community aspiration.

Balancing the institutional commitment to authentic work-based learning and teaching activism as an out-of-classroom experience can be challenging in the context of education practice, which both preserves a social order and seeks to overthrow it (Dorling, 2014), whilst embracing a liberation pedagogy within an environment of conservative neoliberal professionalism. Beyond this, the social justice discourse has, in the contemporary academic environment, the potential to be seduced by an appropriation, which places the discourse at the service of the neo-liberal push for competitive and competing economies (Singh, 2011).

Paulo Freire is arguably amongst the most influential educators of the twentieth century. Certainly, Freire has had a profound impact in the community education movement, amongst progressive schools and teachers, and in the radicalising of education as a force for social change. His seminal work, *Pedagogy of the Oppressed* (1970), transforms education into a weapon for social change; learning becomes the means by which we can understand and see, criticise and transform the world around us. As an educator working largely with relatively poor students (by New Zealand standards) in a social practice department with a strong commitment to social justice, Freire is a very relevant pedagogical resource .

Social Practice, the department where I teach, has a long and proud tradition of teaching and research, as well as community development practice. Community development is another discipline profoundly influenced by Freire's work. Charlie McConnell, the immediate past president of the International Association for Community Development (IACD), mapped the Freirean influence and concluded that it informed the critical rights-based pro-poor approach (McConnell, 1977).

Freire's criticism of neoliberalism, and its impact on higher education, is also important (Escobar, 1994). The neoliberal understanding born in the early eighties in Thatcher's Britain was significantly advanced from 1984 in the New Zealand context. Freire visited New Zealand in 1974, where he raised challenging questions about colonialism, race relations and oppression in contemporary New Zealand.

While Freire's critical analysis and pedagogy have had a significant impact on community development teaching, the universal application of a pedagogy developed in vastly different circumstances is not without its perils (Choules, 2007). Freire's pedagogy does not fit well with the ideology of current tertiary education in New Zealand as there is some tension in maintaining a strong critique of the neoliberal agenda within an institution which has embraced it so thoroughly (Giroux, 2002). However, two Freirean tools which have proven very useful in community development teaching are dialogue and possibility, methods which enable conversations without baggage or blame to explore difficult issues and solutions which appear unreachable when constrained by predetermined ideas. Veteran community activist Vivian Hutchinson refers favourably to dialogue when she says, "In learning communities we get to remember that conversation is the way the world is remade. Conversation is the work" (Hutchinson, 2011, p. 68).

A second tool, Freire's notion of viewing history as a possibility (Freire, MacKinnon, Fraser, & Macedo, 1997), invites communities to critically deconstruct the discourse around them.

The following three case studies describe providing a shared experience for the development of the dialogue with students. These events were an exploration of creating relevant, out-of-classroom education for change-makers:

## CASE STUDY ONE: UNITE UNION AND THE MCDONALD'S PICKET

Bursting with enthusiasm but devoid of experience, a group of the year one BSP students are desperate to get into social action and seek help for their own out-of-classroom learning experience.

### Context A: BSP students – year-one Inequality class, semester one

This class is typical of BSP classes in terms of its demographics: it has an older profile than usual for Unitec classes, Pākehā students are a minority, and previous academic success is uncommon. A particular challenge in teaching this group is the high number of students with marginal literacy – reading is both uncommon and unpopular for a significant number of these students.

Inequality, the year-one course, introduces students to the notion that an unfair and unequal society is the engine for most of the social problems their professional practice will address. Most first year social workers just want to help people, and the idea that to be of any practical help they will have to address and change a political and economic system can be quite challenging.





### Context B: World

The progressive de-unionisation of the workforce and attacks on collective bargaining since 1991 (Ryall & Blumenfeld, 2014) have led to a rise in contracts which would have been considered unconscionable in an earlier age. The poster child for these were the so-called 'zero-hour' contracts. These contracts required workers to be available for work at all times, but gave no guarantee or security of hours. A worker might be engaged for 30 hours one week and none the next. Zero-hour contracts became associated with exploitative practices in the workplace (Turner, 2013) and were used as a mechanism for disciplining workers who sought to exercise their rights (Kelly, 2014). The Unite union, which works almost exclusively with low-paid and casual workers, led a campaign against the giant multinational fast-food company McDonald's, to draw attention to zero-hour contracts in a campaign to drive these out of the industry.

### Event description

A group of half-a-dozen BSP students wanted to learn more about how change can be made utilising the principle of solidarity, and were seeking experience in direct action. The students had determined that they would lead a protest march against the axeing of a popular current-affairs show on television, *Campbell Live*. In order to support

their initiative, I arranged for the students and myself to join the Unite Union zero-hours picket. The picket was a noisy blockade in Auckland's Queen Street, designed to prevent customers from entering the store. Police were in attendance and the picket was managed by a Unite union official, well experienced in these actions, with the aid of a megaphone.

## Risks

The picket was in a busy thoroughfare, so there were some risks of minor injury and also of arrest. This risk was mitigated to some extent by the presence of experienced union and teaching staff.

## Logistics

This activity was very low cost as pickets are free and participants got themselves to the location with either private or public transport. A friendly community lawyer was also briefed, in the event legal assistance might be required.

## Learnings and outcomes

Participants learnt some useful strategies to maintain the picket and avoid arrest. The experience and professionalism of the picket leaders was discussed, and students determined to invite the leaders to do a workshop with the class, which took place some weeks later. As a result of the workshop, students began to question why the CEO had received a pay rise, increasing his salary to $440,000 while the cleaners were not able to be paid a living wage.

In July 2015, just months after the picket, legislation to ban zero-hour contracts was introduced and, following some negotiation, was passed in early 2016.

## Freirean education

Using Freirean principles, I am teaching by questioning and encouraging students to draw out their own learnings. This addresses Freire's critique of the banking notion of education where students are treated as empty vessels to be filled. The educational experience is dialogical and an expression of the Freirean principle of cooperation and unity for liberation, as well as a good platform for the discussion of authentic organisation. In some instances, Freire's notion of cultural synthesis is compromised by the asymmetries of experience between the students and leaders, and the need to act unilaterally to prevent arrest and ensure safety.

## CASE STUDY TWO: THE CAMPBELL LIVE SHOW, A PROTEST MARCH

A breathless and wild-eyed student bursts into my office, she is panting and visibly agitated. "I've … well … well, I've done something." She thrusts her mobile phone towards me saying "Look." She has opened a Facebook page, she has posted an event, she is organising a protest march to the television studios. "That's great" I responded, but the student was not to be comforted. She wrung her hands and announced, "I've never even been to a protest, how will I know how to lead one?"

## Context: BSP students – year-one Inequality class, semester one

This case study uses the same group of students as case study one but takes place one month later. Every week the class examined inequality in the news, from stories students brought to class and discussed. In a neoliberal environment with a highly commercialised media and a relentless reduction in quality, independent journalism, sympathetic stories challenging the economic orthodoxy are rare (McChesney, 2001).

## Context: Outside the classroom – the media world

For many years a popular programme in current affairs which was unafraid to challenge this orthodoxy was the prime-time show *Campbell Live*. Somewhat paradoxically, this show was produced and delivered by a privately-owned broadcaster rather than the state channel. All of New Zealand's major non-state media groups are foreign-owned, and controlled by finance industries (Myllylahti, 2016). The programme aired Monday to Friday at 7pm on TV3 from March 2005 to May 2015. Clips from the show are regularly used in the class to promote discussion. Midway through the semester the owners of TV3, MediaWorks, announced that the show would be ending.

## Event description

Utilising tutorial time and social media, which included an event Facebook page, the students planned a protest march against the pending cancellation of *Campbell Live*. Following the zero-hours picket, they decided to partner with the Unite union again, utilising their organising capacity and greater direct-action experience. In the process of gathering support, they also joined with a Christchurch-based activist who had begun a nationwide petition. The development of these partnerships led to significant learning discussions in the classroom and the corridors, and negotiations of competing interests with the positions of other stakeholders. For some the protest was about preserving a critical voice, for others about supporting a programme which had exposed the zero hours issue. In activities of this nature we do not always garner complete consensus of purpose before moving to action.

## Risks

There are significant risks in protest (Alinsky, 1971). Taking on a media giant (Myllylahti, 2016) with a small group of enthusiastic but inexperienced students carries with it both a reputational risk and the risk of reprisal. There is also the risk of injury, and potentially the risk of arrest. The exuberant protest clearly did not have any insurance cover for these eventualities.



## Logistics

After discussion with Unite union, other activist groups and teaching staff, and following their own enquiry, the students decided not to apply for a protest-march permit, which is required when marching on the road, and also necessitates a police escort for traffic-control purposes. Promotion of the march was to be by word of mouth and social media, so there were no associated costs. Participants made their own way to the assembly point using private or public transport. Banners and placards were made in the institute's department, using scrap materials and some leftover house paint, so this was a low-cost but high-impact affair.

## Learnings and outcomes

The students managed all of the organising themselves, including developing the communications platform, identifying leaders, spokesperson and marshals, and calling for advice and support from teaching staff when needed. Emboldened by their experience at the zero-hours picket, the students and other protestors showed a healthy lack of respect for the security, breaching the security cordon and succeeding in presenting their petition to MediaWorks management. In an act of spontaneous organisation worthy of the Italian anarchist Errico Malatesta, the students invaded and occupied the media building, locking security out and rapidly changing the power relations in the

demonstration. However, TV3 did end *Campbell Live* and the station's and replacement-offering's ratings plummeted. In January 2016 John Campbell was reinstated as a popular news and current affairs presenter in the multiplatform programme *Checkpoint*.

## Freirean education:

The dialogical concept of cooperation is tested in this case study, where relatively young and inexperienced students must negotiate with union leaders and activists to garner support, while not losing the thematic integrity of their protest. The case rests on the learnings arising from the praxis of the previous case. What Freire describes as the emerging 'conscientisation', provides rich ground for discussion and debate in and out of the classroom. The experience is almost the opposite of the banking concept of knowledge criticised by Freire – a model of education where knowledge is seen as a gift to be bestowed by the knowledgeable to those they consider know nothing (Freire, 1970).

## CASE STUDY THREE: THE CHILD POVERTY ACTION GROUP BREAKFAST

Small classes of senior students are an opportunity for less-hierarchical teaching and learning, where a student's experience of childhood poverty and a parent's fear of inability to provide, are as valid and powerful as the economists' analysis.

## Context: BSP students – year-three Advanced Community Development class, semester one

The Advanced Community Development class focuses on the work of Freire and the application of critical theory. The class is small, with only four students, and they have wide and varied life experiences to draw on when examining social problems, critically analysing these, and learning and theorising how change might be made. The inclusion of studies into poverty is essential to the education of social workers, but is often overlooked (Krumer-Nevo, Weiss-Gal, & Monnickendam, 2009).

## Description

The Child Poverty Action Group (CPAG) is the pre-eminent policy advocacy group concerned with child poverty in New Zealand. Its members include prominent academics, church and community-sector leaders, and campaigners. The CPAG breakfast is held the morning after the annual national budget is delivered. Overnight, researchers and policy analysts prepare briefing papers on the impact of the budget on child poverty, and compare the child poverty commitments made in the budget with competing stakeholder and policy objectives. For many years the Unitec social work department has sponsored students to attend the breakfast in the company of one or two members of staff.

## Risks

This is a relatively risk-free event, although given the audience has a reasonably sophisticated understanding of both the budget and macroeconomics, there is potential for students to be excluded should language and concepts be unfamiliar to them. There are no legal risks in attending.

## Logistics

The logistics for this exercise are relatively simple. The breakfast begins at 6.30am, and students make their own

transport arrangements. The breakfast is completely organised by the CPAG group and the department meets the costs of student attendance.

## Learnings and outcome

In 2017 the students' major assignment was an essay analysing child poverty with a Freirean lens, and answering the question, "What would Freire do?" The first thing students at the breakfast learnt was that even brilliant economists can produce poor-quality presentations. However, the level of detail and analysis in the presentations enabled all participants to engage in a lively debate about the budget, and who was being best served by it. The experience of senior economists validating the lived experience, both as children and parents, of the students was enormously powerful for both the lecturer and the students, and provided a platform for rich discussion in the subsequent tutorial. Students became adept at analysing policies for their impact on child poverty, and the policies of tertiary institutes were not exempted.

## Freirean education

The generative themes of individualism and unquestioned obedience to the market that provide the foundations of neo-liberalism, and which have supressed the discussion of child poverty, were exposed and discussed in the class and the process was concientising in the Freirean sense. Yet, managing the asymmetries of understanding between the analysts and practitioners (who do not have the same critical awareness) can be challenging. The students were aware of the power imbalance inherent in the expert forum of the breakfast, but did not feel that power was held over them, or that the authority of the presenters is exercised in a manner which might preclude the mutual trust which Friere believes is essential for transformative education (Freire, 1970).

## CONCLUSION

Out-of-classroom education for social change-makers can be fun, active learning but the sought social change may not necessarily align with the values of the education provider. Students who learn to effectively resist and challenge injustice may be less tolerant of this in their own educational experience. Teachers who seek to utilise real-world learning in change-making may face potential conflict with the values of contemporary neo-liberal institutions. Both teachers and students will position themselves in a partisan position in relation to power, either aligning with or opposing the powerful.

Education is not neutral inside or outside the classroom – it domesticates or liberates. In following a Freirean pedagogy we commit to standing with the poor and oppressed as part of their struggle. Educating social activists in the Freirean tradition positions the educators in opposition to the pervading neoliberal tradition and may highlight very different world views. When we carry this education outside the classroom to the streets, the dichotomy is further exposed. Relevant education in solidarity with social change will require courage when a protest or picket line looks like a classroom to us.

Machiavelli wrote *The Prince* as a manual for elites on how to hold on to power. Social practice teaching and learning should instead follow the works of Freire, or Alinsky and Rickets, all of which should be a manuals for the have-nots – an education in how to seize power.

## FURTHER RESEARCH

Opportunities for further research in the education of activists should be encouraged. Protest plays an important part in balancing power in democracy and it would be interesting to learn more about how we best educate for this purpose. Longitudinal work might inform how these learning experiences inform practice in the field of social change-making.

## REFERENCES

Alinsky, S. (1971). *Rules for radicals: A practical primer for realistic radicals*. New York: Random House.

Apple, M. W. (2006). Understanding and interrupting neoliberalism and neoconservatism in education. *Pedagogies*, *1*(1), 21-26. https://doi.org/10.1207/s15544818ped0101_4

Benefer, R. (2007). Engaging with employers in work-based learning: A foundation degree in applied technology. *Education and Training*, *49*(3), 210-217. Retrieved from https://doi.org/10.1108/00400910710749341

Choules, K. (2007). Social change education: Context matters. *Adult Education Quarterly*, *57*(2), 159-176. Retrieved from https://doi.org/10.1177/0741713606293912

Dorling, D. (2014). *Inequality and the 1%*. London, UK: Verso.

Escobar, M. (1994). *Paulo Freire on higher education: A dialogue at the National University of Mexico*. Albany, NY: State University of New York.

Freire, P. (1970). *Pedagogy of the oppressed*. New York: Continuum.

Freire, P., MacKinnon, T., Fraser, J., & Macedo, D. (Eds.). (1997). *Mentoring the mentor: A critical dialogue with Paulo Freire.* New York: Peter Lang.

Giroux, H. (2002). Neoliberalism, corporate culture, and the promise of higher education: The university as a democratic public sphere. *Harvard Educational Review*, *(72)*4, 425-464.

Hutchinson, V. (2011). *How communities heal*. New Plymouth, New Zealand: Florence.

International Federation of Social Work (IFSW). (2014). Global Definition of Social Work. Retrieved from http://ifsw.org/get-involved/global-definition-of-social-work/

Kelly, H. (2015, March 7). Zero hours expoitation. *New Zealand Herald*. Retrieved from http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11413098

Krumer-Nevo, M., Weiss-Gal, I., & Monnickendam, M. (2009). Poverty-aware social work practice: A conceptual framework for social work education. *Journal of Social Work Education*, *45*(2), 225-243. Retrieved from https://doi.org/10.5175/JSWE.2009.200600144

Lakes, R., & Carter, P. (2011). Neoliberalism and education: An introduction. *Education Studies*, *47*(2), 107-110.

McChesney, R. W. (2001). Global media, neoliberalism, and imperialism. *Monthly Review*, *52*(10), 1.

McConnell, C. (1977). *The community worker as politiciser of the deprived*. Paisley, UK: Paisley University Press.

Mizrahi, T., & Dodd, S. J. (2013). MSW students' perspectives on social work goals and social activism before and after completing graduate education. *Journal of Social Work Education*, *49*(4), 580-600. Retrieved from https://doi.org/10.1080/10437797.2013.812504

Myllylahti, A. M. (2016). *JMAD New Zealand media ownership report 2012*. Auckland, NZ: AUT Centre for Journalism, Media and Democracy.

O'Meara, P. (2014, November 16). Insight documentary: Flexibility and employment law. [Radio documentary]. Wellington, New Zealand: Radio NZ. Retrieved from http://www.radionz.co.nz/national/programmes/insight/audio/20157262/insight-for-16-november-2014-flexibility-and-employment-laws

Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy*. https://doi.org/10.1080/02680930500108718

Plant, R. (1974). *Community and ideology*. London, UK: Routledge and Keegan Paul.

Ricketts, A. (2012). *The activists' handbook*. London, UK: Zed.

Roberts, P. (1999). *Paulo Freire, politics and pedagogy: Reflections from Aotearoa New Zealand*. Palmerston North, New Zealand: Dunmore.

Ryall, S., & Blumenfeld, S. (2014). *The state of New Zealand union membership in 2014*. Wellington, New Zealand: Centre for Labour, Employment and Work, Victoria University of Wellington. Retrieved from https://www.victoria.ac.nz/som/clew/files/The-state-of-New-Zealand-Union-membership-in-2014-FINALwithtables.pdf#unions

Singh, M. (2011). The place of social justice in higher education and social change discourses. *Compare: A Journal of Comparative and International Education*, *41*(4), 481-494. Retrieved from https://doi.org/10.1080/0305792 5.2011.581515

Turner, S. (2013). Zero-hours contracts lead to gross exploitation of workers. *Nursing Standard*, *28*(14), 35. Retrieved from https://doi.org/10.7748/ns2013.12.28.14.35.s48

Unitec Institute of Technology. (2017). Partner with us. Retrieved from http://www.unitec.ac.nz/about-us/our-partnerships/industry

## APPENDIX A

### Resources for case study one: Zero hours picket.

https://www.theguardian.com/world/2016/mar/11/zero-hour-contracts-banned-in-new-zealand
http://www.unite.org.nz/the_real_heroes_of_the_end_to_zero_hours
http://www.unite.org.nz/how_unite_took_on_the_fast_food_companies_over_zero_hour_contracts_and_won
https://www.beehive.govt.nz/release/addressing-zero-hour-contracts

### Resources for case study two: March for Campbell Live

https://www.youtube.com/watch?v=SzLBJn_wY3M
http://www.stuff.co.nz/entertainment/tv-radio/68022219/john-campbell-greets-save-campbell-live-marchers
https://thestandard.org.nz/campbell-live-day-of-action/
https://thedailyblog.co.nz/2015/04/10/save-campbell-live-end-zero-hours-protest-this-wednesday/
https://thedailyblog.co.nz/2015/04/09/save-campbell-live/

### Resources for case study three: CPAG breakfast

http://www.cpag.org.nz/
http://www.cpag.org.nz/news/budget-2017-a-trickle-not-a-tide/
http://www.cpag.org.nz/assets/2017%20CPAGBudgetAnalysis%20Summary.pdf

### Resources for studying Freire

http://www.reflect-action.org/freire

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# LEADING TECHNOLOGY INNOVATION:

# WHEN BELIEVING IS SEEING

HERBERT THOMAS
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TRUMAN PHAM
DARCY VO

## ABSTRACT

The literature on the professional development of primary and secondary teachers suggests that isolated initiatives are not effective in bringing about changes in teachers' practices and beliefs. Research argues that changes in belief result from changes to practice that are perceived to improve student learning.

This study examines the influence of an extended, work-integrated professional development initiative on primary and secondary teacher leadership practice. As an example, a leadership course, which is part of the Postgraduate Certificate in Applied Practice (Digital and Collaborative Learning) for primary and secondary in-service teachers, will be examined. The research question guiding the investigation is: How does successful completion of leadership-focused professional development influence teachers' practices and beliefs in leading innovations in their work environments? As a framework for analysis, we (the authors) have adopted the seven-pillared definition of school-based digital leadership proposed by Sheninger (2014): communication, public relations, branding, student engagement and learning, professional growth and development, re-envisioning learning spaces and environments, and opportunity. We have adapted Sheninger's concept into a set of themes, sub-themes and key questions for investigation.

The methodology is based on a series of interviews conducted with randomly-selected primary and secondary teachers who have completed the leadership course during the preceding twelve months. The findings identify common changes in leadership practices and beliefs, and evaluate these against Sheninger's seven pillars of digital leadership. This exploratory study informs a greater large-scale evaluation that may provide valuable insight into the design of teacher leadership courses.

## INTRODUCTION

The Postgraduate Certificate in Applied Practice (Digital and Collaborative Learning) is a 32-week, NZQA Level 8, part-time programme. The programme is delivered at the Mind Lab by Unitec and offers primary and secondary teachers the opportunity to enhance their knowledge and skills related to twenty-first century learning. This programme is offered irrespective of the specific levels or learning areas that the teachers facilitate, and consists of four 15-credit, compulsory courses: Digital and Collaborative Learning in Context, Leadership in Digital and Collaborative Learning, Research and Community Informed Practice and Applied Practice in Context. The aim of the Leadership in Digital and Collaborative Learning course is to enable educators to lead innovation in digital and collaborative learning, whilst drawing upon concepts associated with leadership theory, educational theory and research. The leadership approach that informs the aim of the course and associated learning outcomes corresponds with the concept of leadership outlined by Robinson, Hohepa and Lloyd (2009, p. 66):

- It includes both positional and distributed leadership.
- It views leadership as highly fluid.
- It sees leadership as embedded in specific tasks and situations.

The course encourages students to consider leadership theories, styles and attributes as malleable and integrated tools that can be shaped to address the specific requirements of a particular context.

The aim of this investigation is to establish whether the completion of leadership-focused professional development influences teachers to change leadership practices in their work environments and, if so, whether such changes lead on to associated shifts in beliefs and attitudes. This exploratory study attempts to ascertain whether changes in teacher leadership practices are largely idiosyncratic, based on interpretations of leadership – or whether engagement in an

extended, work-integrated professional development initiative shapes leadership practices and beliefs. Such changes in practices and beliefs are then evaluated using the seven pillars of digital leadership identified by Sheninger (2014).

The findings of this research may contribute to: a) our understanding of how teachers define leadership in their daily practice, and b) the design of teacher leadership professional development.

## LITERATURE REVIEW

The literature reviewed in this section focuses on three questions related to the key concerns of this paper: Do one-off professional development initiatives, such as conference attendance or focused workshops, influence teacher practices and beliefs? If professional development, irrespective of design, does influence teacher practices and beliefs, what evidence is there to suggest that such altered practices and beliefs influence student outcomes? Answers to these questions will provide some insight into the effectiveness of professional development for primary and secondary teachers. The third question specifically addresses the role played by teachers in leading technology integration in schools.

### Professional development and practice

The literature on teacher professional development suggests that one-off professional development events, such as a conference or a half-day workshop, are not effective in bringing about changes in teacher practice, beliefs and attitudes (Guskey, 2002; Davis, Preston, & Sahin, 2009). Research has found that changes in beliefs and attitudes take place as a result of changes to practice that are perceived to improve student learning (Guskey, 2002). The leadership course of the Postgraduate Certificate in Applied Practice (Digital and Collaborative Learning) encourages participants to apply what they learn during weekly sessions to their daily practice on an ongoing basis.

The question raised is whether the 'sustained engagement' learning, which takes place during professional development initiatives such as The Postgraduate Diploma in Applied Practice, leads to changes in teacher practices, beliefs and attitudes. Whitworth and Chiu specify such development as changes in teacher beliefs, understandings and/or practices (2015), while Guskey believes professional development programmes are designed to bring about changes in teacher attitudes and beliefs, and changes in student outcomes (2002). Yet Guskey argues that most professional development programmes are ineffective because they ignore two critical issues, namely "what motivates teachers to engage in professional development", and "the process by which change in teachers typically occurs" (2002, p. 381). Rather than professional development leading to changes in teachers' beliefs and attitudes (and thus informing changes in classroom practice), Guskey suggests that shifts in beliefs and attitudes take place after evidence of improved student outcomes becomes available following on from changes in classroom practice (2002, p. 383). From the perspective of educational change, therefore, changes in teacher beliefs and attitudes follow changes in classroom practices and subsequent gains in student outcomes, rather than the other way around. Professional development, viewed as a mechanism for bringing about change to teachers' beliefs, attitudes and practices (and student outcomes), needs to be reconsidered as, according to Guskey, "sustaining change … is one of the most neglected aspects of professional development" (2002, p. 388). Rather than the quality of initial professional development playing a significant part in shaping responses, it is more likely that improved student outcomes, continued support and feedback are likely to lead to longer-term success.

Furthermore, the view of teacher and educational change addressed above does not account for the multitude of situational and contextual influences that shape change initiatives in practice (Guskey, 2002; King, 2014; Fullan & Quinn, 2016). These influences range from the quality of ongoing feedback (Guskey, 2002), to the depth of teacher knowledge and understanding regarding practices (King, 2014), and the extent to which there is shared understanding in an institution about the nature of the work of its teachers (Fullan & Quinn, 2016).

## Teacher practice and student outcomes

Whitworth and Chiu argue that establishing the nature of the relationship between professional development and student outcomes is beset by a scarcity of research on the topic (2015, p. 125), although Hattie (2009) suggests otherwise. In a meta-analysis of 800 studies, Hattie defines an effect size as "[Mean end of treatment – Mean beginning of treatment]/ standard deviation" (2009, p. 8). He then argues that an effect size of 0.40 "sets a level where the effects of innovation enhance achievement in such a way that we can notice real-world differences, and this should be a benchmark of such real-world change" (2009, p. 17). Against this background, he finds that the effect size of teacher professional development on student achievement is 0.62 – well above the 0.40 threshold. This finding is also supported by Yoon, Duncan, Lee, Scarloss and Shapley (2007) who found that an average of 49 hours of teacher professional development could boost student achievement by about 21 percentile points. Although further explication of the situations and contexts in which these effect sizes were obtained might be required (but are beyond the scope of this paper), the findings do provide some evidence of the influence of professional development on student achievement. There is, therefore, support in the literature for the efficacy of professional development that is sustained, inseparably integrated into practice and suitably scaffolded by teacher supports in context.

The remaining question is whether sustained, work-integrated professional development of primary and secondary teachers influences their leadership of technology integration in their schools.

## Teacher leadership of technology integration

A number of studies consider the leadership of technology integration in schools from the perspective of the principal as de facto leader of technology integration (Dawson & Rakes, 2003; Flanagan & Jacobsen, 2003; Yuen, Law & Wong, 2003). There are many studies approaching technology integration in schools from the perspective of distributed leadership. In the ensuing discussion, 'technology integration' and 'integration of educational technology' are deemed to be equivalent concepts.

Davies claims that the relationship between the leadership of technology integration and school change is in need of further research, focusing more on descriptive analysis than pure prescription (2010, p. 59). However, some studies shed light on the nature of this relationship. Yuen et al. argue that variations in educational technology practices across different schools are strongly influenced by the leader's vision and understanding of technology integration into the curriculum (2003). In addition, such variations in practice across schools is also influenced by school culture and general vision and mission (Yuen et al., 2003). These findings are also supported by Mingaine (2012) and Chang (2012). In addition to these strategic concerns, Davis, Preston and Sahil emphasise the importance of the school leader's understanding of both the affordances of individual educational technologies, as well as ways in which use of these technologies can be incorporated into teaching and learning at the school (2009). Another aspect of the relationship is the fact that school leaders have, in the past, been viewed as leaders of educational technology integration, purely because they have controlled budgets and influenced school resource allocation (Davies, 2010).

Ultimately, leadership vision and the extent to which resources can be brought to bear upon the integration of technology in the curriculum are not influential enough on their own to bring about meaningful change. Such integration of technology has to be crafted carefully to become part of the school's overall approach to making learning more vigorous and more meaningful.

Fullan and Quinn define 'coherence' as "the shared depth of understanding about the purpose and nature of the work" and do not view technology as a driver for meaningful change in schools (2016, p. 1). Leaders who focus on technology-as-driver risk overwhelming staff as successive technologies are implemented[1] with scant regard for how these technologies meaningfully support and enhance the school's approach to striving for improved student

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1    This is a problem referred to by Fullan & Quinn as 'initiativitis'.

learning (2016, p. 5). Instead, leaders should focus on a small number of tested drivers for change by, as Fullan and Quinn put it, "focusing direction; cultivating collaborative cultures; deepening learning; and securing accountability" (2016, p. 14). They also state that "coherence making … has to be achieved at the receiving end, not the delivery end" (p. 6). Positional leaders may attempt to design leadership practices with coherence in mind, but such practices can only lead to change in environments where staff across the school actively engage in coherence-making. Resultantly, it can be argued that coherence-makers engage in a form of distributed leadership that partly conforms to Fullan's (2005) definition of leaders as systems thinkers in action. The current investigation is motivated to identify leadership practices in technology integration of teachers who are aware of differing approaches to educational leadership.

## METHODOLOGY

### Background

To provide a framework for analysis, we have used Scheninger's (2014) definition which outlines seven pillars of digital leadership; communication, public relations, branding, student engagement and learning, professional growth and development, re-envisioning learning spaces and environments, and opportunity.

These aspects of leadership fall into three areas of concern. Firstly, there are the external links and channels, then the internal practices for students and staff, then the potential structural changes. Depending on the role that an educator may have, digital leadership may focus on one or more of these areas, and in different ways. For example, a classroom teacher manages communication channels between their class and parents, while a principal manages communications at a school-wide level. In order to utilise the concepts of digital leadership as a framework for analysis, we have adapted Scheninger's 'seven pillars' into a set of themes, sub themes and key questions.

### Participants and procedure

This investigation uses a qualitative case-study research design informed by Sheninger's (2014) theory. Semi-structured interviews (please see the appendix) were conducted with four participants from venues across New Zealand where the leadership course was presented from July 2016 to October 2016. Since the cohort consists of equal numbers of primary and secondary teachers, two primary and two secondary teachers were interviewed.

The interview questions were formulated by the research team, to probe the extent to which participants engaged in leadership practices aligned to Sheninger's (2014) pillars of digital leadership. After approval had been obtained from the Unitec Research Ethics Committee and participant consent had been gained, the interview schedule was piloted with four participants, and question four was adapted to include two parts. Originally, question four was designed to elicit both responses on school visions as well as responses related to strategies employed to gain school community buy-in. Pilot interviewees commented on their school visions but did not address strategies employed to gain school community buy-in. In order to elicit this information, it was decided to split the original question four into two separate questions. The interviews were conducted either in person or via electronic means such as Skype or Google Hangout. Interviews, with the approval of the interviewees, were audio-recorded for transcription purposes.

### Data analysis

Following transcription, key themes were identified across the four responses provided to each question, hand-coded separately by two members of the research team and then grouped together. The identification and coding of the key themes was presented to the remainder of the research team for comment and adaptation as required.

# Findings

Findings are presented in the form of a series of short tables. Each table relates to a specific question posed during the interviews and contains key data relating to the agreed-upon codes for the question concerned. Discussion of these findings and relevance for this study are taken up in the next section of the paper.

**Question 1: What role(s) did you play in the leadership/followership of digital and collaborative learning initiatives in your school/work environment before enrolling in the course?**

| Role | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|------|------|------|------|------|
| Formal leadership position | No | Yes | Yes | No |
| Leadership of formal, school-endorsed project | Yes | No | No | No |
| Leadership of digital initiative? | No | Yes | Yes | No |
| Leadership of collaborative initiative? | Yes | Yes | No | No |

**Question 2: Having completed the Leadership in Digital and Collaborative Learning Course, how do you now use digital tools as a leader to communicate to stakeholders?**

| Target groups | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|------|------|------|------|------|
| Communicate with students? | No | Yes | Yes | Yes |
| Communicate with teachers? | Yes | Yes | No | No |
| Communicate with parents? | No | No | No | Yes |
| Communicate with the community? | No | No | No | No |
| Applications or tools used? | Google Docs | Google Classroom, Google+ | Yammer | Electronic newsletter |

**Question 3: As a leader, how do you use digital tools to take control of public relations to spread positive news?**

| Target and aim | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|------|------|------|------|------|
| Target audience, aim and application or tool | Parents/ Share student success to encourage dialogue/ Seesaw (e-portfolio) | Colleagues and educationalists/ Contribute to and learn from professional learning network/ Twitter and blog | Parents and school stakeholders/ Showcase school successes/ Electronic newsletter | Parents and school stakeholders/ Showcase school successes/ Electronic newsletter |
| Target audience, aim and application or tool | Parents and community/ Profile school and marketing/ Facebook | | | Parents/ Showcase individual student successes/ Videos of student performances - iPad |

**Question 4: (a) What characterises your and/or your school's vision of digital and collaborative learning, and (b) how do you get your school (or organisational) community to embrace this vision?**

| Vision | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| Coherent school vision? | Not clear | No | Yes | No – management-dictated vision; not embraced by all teachers |
| Vision endorsed by interviewee? | Yes | Not applicable | Yes, but vision needs to emphasise educational affordances of devices | No |
| Key characteristic of vision? | Educationally meaningful use of devices | Not applicable | 'Bring Your Own Device' implemented across the school | Teacher-driven learning |
| How is school community buy-in gained? | Not clear | Not applicable | Was gained by project team before the interviewee became involved | Not sought or gained |

**Question 5: How do you use both digital and face-to-face learning networks to shape your professional development?**

| Networks | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| Networks used during course? | Used Twitter and blog to network with course-based learning community | Used Twitter and Google+ to network with course-based learning community | Used Twitter and Google+ to network with course-based learning community | No |
| Did use persist after course? | No | Yes | Yes | No |
| New networks established after course? | No | Use Twitter to contribute to and learn from international educator community of practice | Catholic Schools Digital and Collaborative Community of Learning (online tools and face-to-face meetings) | No |

**Question 6: How do you ensure that technology supports effective and authentic learning in a particular context?**

| Technology | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| Application or tool | iPads and Seesaw | Google Classroom | Online competitions and virtual reality applications | iPads |
| Effective? | iPads used mostly for games but Seesaw used to reach learning outcomes | Yes | Partially effective – did not reach all learning goals | Not yet. The focus has been on suitable purchasable applications |
| Authentic? | Sometimes | Yes – students enabled to shape their own curricula | Not really, since resource links were supplied to students | To some extent: teacher and students have sourced information together |
| Context | Reading and Mathematics | Blended learning across learning areas | Media design | Reading and writing |

**Question 7: What are the most important things you consider in setting up physical environments and technical infrastructure for learning?**

| Considerations | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| Physical | Open, bright, colourful, age appropriate, close to toilet, place for bags & books | Not mentioned | New curtains, window treatments, lighting, colour, blinds, break-out space | Spaces where student can learn in small groups |
| Technical | Not mentioned | Top-level computers, projector, mini tripods, film-making equipment, Chromebooks | Computer charging points, equipment installed at appropriate height for student use | Availability of iPads and desktops |
| Emotional | Welcoming and safe | Not mentioned | Teacher and students are on a learning journey together | Not mentioned |
| Pedagogical | Meets the needs of learners | Not mentioned | Allow students to explore the space and provide opportunities for variety of learning uses | Spaces for pair learning activities |

**Question 8: How do you identify and implement digital and collaborative learning opportunities for working with partners from beyond the school community?**

| Partnerships | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| Partners | Other schools | Local technology company | Catholic Schools Community of Learning | Potentially rural and low-decile schools |
| How implemented? | Skype sessions allow both teachers and students to conduct learning sessions across schools | Nothing – much discussion but nothing implemented | Collaboration (online and face-to-face) to raise the literacy standard for Year 7-10 boys | Envisage collaboration on communal challenges |

**Question 9: What was the most important thing you learned from the Leadership course?**

| Learnings | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|---|
| About yourself | Thought that I hadn't really done anything as a leader and then realising actually I have totally done that / this is the kind of leader that I am, and this is the kind of leader that I want to be | Since the course I've made connections with people who are facilitating agile and design thinking | Basically, that I can do it | I am a leader and I'm a follower |
| About leadership | There are different types of leadership | The leadership part was fascinating | The course helped me to recognise, first of all, my own leadership style and, then, why I might be clashing so much with my syndicate who have very different leadership styles / Develop empathy, respect with colleagues | If you don't agree with somebody's leadership style you should be able to stand up and say, and tell them so. |
| About your beliefs | Gave me a lot more confidence | I am curious about adult cognitive development and change – I want to know more | | Made me think more about how other people approach things and how I approach things and where we meet / It has given me confidence that I actually know more than I thought I did/ I feel empowered |

**Question 10: Is there anything that I have missed that you want to add or you think I should know about?**

| Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|---|---|---|---|
| Digital skills are transferrable but when contact time with students in schools is short, digital is difficult | No comment | Even after completing the programme, I still feel I can contact the Mind Lab, so I don't feel cast adrift | The programme needs more differentiation and options |
| Older kids do flipped learning | | There is a slower process of change in my school because not all teachers did the programme | I want help with IT things such as how to use a data projector / I want to know how to do the physical aspects |
| Short-term use of digital tools for short-length classes | | We need to account for a community that is not all digitised | The programme has a lot of looking at the big picture but not always enough of what teachers really need |
| Not all courses in the programme were relevant | | I have minimised the furniture in my room to make the space more flexible | Others in the cohort were frustrated at our tech ability |
| Students learn through play so the digital component is tricky | | | Make the use of a blog compulsory throughout the programme from the beginning – if it is not, people will opt out |
| I was challenged by the idea that this was not about apps but about transforming teaching | | | |
| A lot of time is spent thinking of ways to apply course content in my setting | | | |
| I was stagnant in teaching, now I want to keep up to date | | | |
| I have embraced the Idea that teachers are learners too | | | |
| Reflective teaching was challenging | | | |

## DISCUSSION

Findings relating to questions one to nine may be discussed in terms of four broader themes. Firstly, questions one and nine relate broadly to interviewee leadership roles and beliefs. Secondly, questions two and three focus on interviewee use of digital tools as means of communication and public relations. Thirdly, questions four and five elicit responses relating to the immediate and broader professional environment in which teachers work. Finally, questions six, seven and eight focus on aspects of learning with technology. The following discussion considers the findings presented above in terms of these four themes, the data set having been made up of four transcribed interviews with teachers who completed the Leadership course.

## Leadership roles and beliefs

This paper sets out to assess the influence of leadership-focused professional development on teacher practices and beliefs relating to digital and collaborative learning. Question one probes the extent to which such practices might have been shaped by leadership experiences of interviewees prior to engagement with the Leadership course. Two participants indicated that they had occupied official leadership positions before enrolment in the course, while a third had been a member of the leadership team of a formal school project. The fourth participant had not played a formal or informal leadership role in her school prior to enrolment in the course. Two considerations need to be mentioned in this regard. Firstly, the broad definition of leadership adopted in the Leadership course encompasses formal, informal and class-based leadership practice. Participants appear not to have contemplated class-based leadership in their responses to this question. The question might have elicited such responses had the word 'roles' been replaced by the word 'practices'. Secondly, participant leadership roles are not equivalent to participant leadership practices. Roles do, however, indicate specific forms of leadership. As such, this needs to be borne in mind when assessing the influence of professional development on leadership practices.

The influence of engagement in the Leadership course on interviewee beliefs is more pronounced and somewhat clearer. Three participants indicated that the course had made them aware of the fact that they were already leaders, and this had given them greater self-confidence in their own leadership abilities. Two of these participants also indicated that an awareness of their own leadership styles had made them more empathetic towards colleagues who exhibited preferred leadership styles that differed from their own. The fourth participant became fascinated with the relationships between leadership, change and adult cognitive development. This interest springs from her involvement in the school-wide professional development of teachers, focusing on the integration of technology into the curriculum. The literature suggests (Guskey, 2002) that changes to teacher beliefs take place as a result of changes in practice and related improvements in student outcomes. Responses to question nine suggest, on the contrary, that changes to teacher beliefs about their own leadership might well precede changes in leadership practices. Further research is required in this regard.

## Use of digital tools

The second broad theme, addressed by way of question two and question three, relates to the use of digital tools to communicate with stakeholders and positively influence public relations. In response to question two, interviewees interpreted 'stakeholders' as students, teachers and parents. No mention was made of any other stakeholders in the school environment, such as the wider community, a board of governors or the Ministry of Education, for example – even though these stakeholders are considered during the Leadership course. One possible reason for this omission might be the fact that communication with these specific stakeholders might be viewed by teachers as the responsibility of the senior management team. Furthermore, three of the interviewees used digital tools they had become familiar with during the course (Google Docs, Google Classroom and Google+) to communicate with the identified stakeholders. Only one interviewee used a tool (Yammer) that had not been mentioned on the course. Exposure to a wide array of digital tools during the course seems to have encouraged teachers to use these digital tools in their practice, rather than identify additional tools that might have been even better aligned to their specific

purposes.

Responses to question three appear to confirm and extend observations made above. Two interviewees indicate that their target audience consists of 'parents and other stakeholders', and that they communicate positive news via contributions to electronic newsletters. Here, two interviewees seem to assume that the responsibility of communicating positive news to broader stakeholder groups is not necessarily theirs. Where interviewees do use digital tools to communicate positive news to parents, this takes place in the context of the teachers' classrooms, rather than the context of the school. Only one interviewee uses a blog and Twitter to communicate with a wider audience of educationalists, but her purpose is professional development rather than communicating positive news – though this might be an unintended consequence.

## The professional environment

The third broad theme addressed via questions four and five examines the extent to which teacher leadership of technology integration takes place in a supportive and professional environment. Question four focuses on the extent to which the teacher's school has a clearly formulated and agreed-upon vision for technology integration. Only one interviewee could clearly formulate a coherent school vision for digital and collaborative learning. This participant personally endorses the vision – with the proviso that the school-wide implementation of Bring Your Own Device (BYOD) is more cognisant of its unique educational affordances, rather than focusing only on the supply of hardware, software and connectivity. She also indicated that the buy-in of the school community had already been achieved by the time she became involved in the initiative. A second participant could not clearly define her school's vision for digital and collaborative learning, but she did personally endorse the school's focus on the educationally meaningful use of digital devices. A third participant indicated that her school's vision for digital and collaborative learning had been defined by senior management, but that this vision was not supported by all teachers in the school and is not endorsed by herself. The fourth participant was adamant that her school did not have any vision for digital and collaborative learning, and said that when she presented such a vision (based on what she had learned on the programme) her proposal had been rejected. Overall, these responses seem to suggest that teachers lead technology integration in schools that do not necessarily provide supportive, coherent visions endorsed by stakeholders across the school community.

Question five focuses on the extent to which teachers garner support for their leadership of technology integration from professional learning networks, either face-to-face or online. During the Leadership course, teachers are strongly encouraged to set up and participate in learning networks, both within and beyond the course. In this regard, three interviewees indicated that they had participated in professional learning networks during the course but only two interviewees had continued participating in these networks after the course had ended. One of these two interviewees indicated that she had expanded her participation in professional learning networks after the course to include an international network of educators.

In summary, interviewee responses suggest that teacher leadership of technology integration does not necessarily take place in schools that provide a supportive, school-wide vision. In addition, responses indicate that participation in wider professional learning networks does not necessarily persist after completion of the course. These observations suggest that teachers lead technology integration in environments that might not necessarily provide them with the professional support that they need.

## Learning with technology

The final broad theme relates to specific aspects of learning with technology. Question six considers the use of technology to support effective and authentic learning in specific contexts. Participants had implemented technology to support learning in reading, writing, mathematics and blended learning across the school. Only one participant claimed, unequivocally, that the implementation (use of Google Classroom) had been effective. A second claimed that the use of Seesaw had aided student learning, but that iPad use had mostly involved playing games rather than

on meaningful learning. A third participant claimed that the use of technology had only been partially helpful in supporting student learning, while the fourth indicated that the implementation of technology had not yet been fully effective in advancing student learning.

Overall, only one participant believed that digitally-enhanced learning had been fully authentic, whereas the other three participants believed that authenticity had been only partially achieved.

The second aspect of learning with technology, addressed in question seven, asks interviewees to identify the most important things they would consider in setting up physical learning environments and the associated technical infrastructure. With regards to physical environments, two participants stressed the importance of sufficient light, while another included vibrant colours, and a third mentioned acoustic qualities. One participant (a primary school teacher) also believed that age-appropriateness of learning space design, proximity to toilets and space for school bags are important. From a technical perspective, two participants emphasised the importance of up-to-date desktop computers; one of them referred specifically to the value of iPads for use, while the other favoured Chromebooks, tripods and video-capture hardware. A third participant (recently involved in the refurbishment of learning spaces at her school) argued the importance of having enough power outlets for students to charge devices, and ensuring that smartboards and whiteboards are positioned at the right height for student use. Only two of the four referred to the importance of evoking positive emotional responses from students in learning spaces. One of these participants suggested that learning environments needed to be safe and welcoming, while the second believed the environment should encourage innovative, experimental behaviour and acknowledge failure as part of the learning process. In short, interviewee responses to this question seem to be shaped to a much greater degree by their individual experiences than their responses to any of the other questions.

The third aspect of learning with technology, addressed in question eight, relates to the identification and implementation of partnerships beyond the confines of teachers' schools. Two of the four participants indicated that they do not engage in digital and collaborative learning opportunities beyond their school walls. A third participant indicated that her students engage in educational Skype chats with children from other schools in the region. A fourth participant indicated that she had been instrumental in setting up a Catholic schools' learning network in her region.

Responses to question ten focus largely on design aspects of the programme as a whole and not specifically on the Leadership course. Such responses are not directly relevant to the matters discussed here. There are, however, some responses that emphasise the difficulty of implementing change initiatives in contexts where neither fellow teachers nor community members might share an interviewee's enthusiasm or vision for the use of digital tools in education.

## CONCLUSION AND OPPORTUNITIES FOR FURTHER RESEARCH

In conclusion, two aspects of this study deserve comment, namely, the suitability of Sheninger's (2014) framework for assessing the quality of digital leadership in schools, and the extent to which the findings of this study confirm or diverge from findings in relevant literature.

The first matter to consider is whether Sheninger's definition (both overt and implied) of leadership is comparable to the definition of leadership proposed during the Leadership course. This course proposes that teacher leadership of a class of students is as much a matter of leadership as a principal's leadership of a school. Although Sheninger (2014) suggests that school leadership does not necessarily rest with the principal, his entire argument is specifically crafted from his own point of view as principal of a school. This discrepancy has significant implications for the measures adopted in assessing digital leadership. The question is really whether the specific measures adopted by Sheninger are necessary and sufficient measures of digital leadership. For example, does digital leadership necessarily include the use of digital tools to communicate with stakeholders and to spread positive news – or does digital leadership necessarily include the establishments of partnerships beyond the confines of the school community? Conversely, Sheninger's framework does not include a range of skill-sets that might directly influence the success

of digital leadership, for example: project management skills; a rudimentary understanding of ways in which the establishment of school technology infrastructure impacts resources, budgeting cycles and strategic planning; and an understanding of regional, national and international support structures and resources – not simply digital tools. In summary, further research is required to identify a theoretical framework that better suits teacher leadership of technology integration in schools.

The second aspect of this study that demands further research is the relationship between the findings of the investigation and relevant literature presented above. One of the insights presented in Guskey's (2002) research is that teacher beliefs and attitudes are not changed as a direct result of professional development initiatives. Rather, professional development encourages teachers to change their practices. Teacher beliefs only alter if changes in practice lead to improvements in student outcomes. The findings of this study suggest that this might not necessarily be the case in leadership-focused professional development. In this study, the most pronounced response to any question was that the professional development undergone by teachers had made them aware of the fact they were leaders, and that this awareness had given them a good deal of confidence in their own ability to engage in leadership practices. In this instance, changes in belief preceded conscious changes in practice. Given the exploratory nature of this study, more research is required to ascertain whether these findings do indeed suggest a divergence from the insights suggested by Guskey (2002) or whether the findings of this research are idiosyncratic. If further research does confirm the findings of this study, then leadership-focused professional development might well differ from other forms of professional development – and changes in belief might well have to precede changes in practice.

## REFERENCES

Chang, I-H. (2012). The effect of principals' technological leadership on teachers' technological literacy and teaching effectiveness in Taiwanese elementary schools. *Educational Technology & Society*, *15*(2), 328-340.

Davies, P. (2010). On school educational technology leadership. *Management in Education*, *24*(2), 55-61. doi: 10.1177/0892020610363089

Davis, N., Preston, C., & Sahin, I. (2009). ICT teacher training: Evidence for multilevel evaluation from a national initiative. *British Journal of Educational Technology*, *40*(1), 135-148. doi: 10.1111/j.1467-8535.2007.00808.x

Dawson, C., & Rakes, G. (2003). The influence of principals' technology training on the integration of technology into schools. *Journal of Research on Technology in Education*, *36*(1), 29-49.

Flanagan, L., & Jacobsen, M. (2003). Technology leadership for the twenty-first century principal. *Journal of Educational Administration*, *41*(2): 124-142. doi: 10.1108/0957823020464648

Fullan, M. (2005). Leadership and sustainability: Systems thinkers in action. Thousand Oaks, CA: Corwin Press.

Fullan, M., & Quinn, J. (2016). *Coherence: The right drivers in action for schools, districts, and systems*. Thousand Oaks, CA: Corwin Press.

Guskey, T. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, *3*(4), 381-391. doi: 10.1080/135406002100000512

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.

King, F. (2014). Evaluating the impact of teacher professional development: An evidence-based framework. *Professional Development in Education*, *40*(1), 89-111. doi: 10.1080/19415257.2013.823099

Kotter, J. (1996). *Leading change*. Cambridge, MA: Harvard Business Press.

Mingaine, L. (2012). Leadership challenges in the implementation of ICT in public secondary schools, Kenya. *Journal of Education and Learning*, *2*(1), 32-43. doi: 10.5539/jel.v2n1p32.

Robinson, V., Hohepa, M., & Lloyd, C. (2009). *School leadership and student outcomes: Identifying what works and why, best evidence synthesis iteration*. Wellington, New Zealand: Ministry of Education. Retrieved from http://www.educationcounts.govt.nz/__data/assets/pdf_file/0015/60180/BES-Leadership-Web-updated-foreword-2015.pdf

Sheninger, E. (2014). *Digital leadership: Changing paradigms for changing times*. Thousand Oaks, CA: Corwin Press.

Whitworth, B., & Chiu, J. (2015). Professional development and teacher change: The missing leadership link. *Journal of Science Teacher Education*, 26, 121-137. doi: 10.1007/s10972-014-9411-2

Yoon, K. S., Duncan, T., Lee, S. W-Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement (Issues & Answers Report, REL 2007–No. 033)*. Washington, DC: US Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://ies.ed.gov/ncee/edlabs

Yuen, A., Law, N., & Wong, K. (2003). ICT implementation and school leadership. *Journal of Educational Administration*, *41*(2), 158-170. doi: 10.1108/09578230310464666

## APPENDIX

## Interview schedule

Opening

**A.      (Who I am)**

Hi, I'm (insert name). Thank you for agreeing to meet with me. Just to confirm my background – I currently work for The Mind Lab by Unitec as a postgraduate facilitator.

**B.      (Purpose)**

The Mind Lab by Unitec would like to collect data from students who have completed the course on Leadership in Digital and Collaborative Learning and this is why we have asked you for an interview.

The research question guiding the investigation is: How does successful completion of a Leadership in Digital and Collaborative Learning (Leadership) course influence teacher practice in leading digital and collaborative innovations in their work environments? And how do such changes influence teacher beliefs and attitudes towards leadership of digital and collaborative learning?

We are interested in learning about whether completing the Leadership in Digital and Collaborative Learning course has had any influence on your leadership practice. We would like to know about the changes in your practices, beliefs and attitudes towards leadership.

**C.      (Motivation)**

We hope to be able to use the findings of this research to contribute, firstly, to our understanding of the ways in which teachers define leadership in their daily practice and, secondly, to the design of teacher leadership professional development in so far as it is able to influence both teacher practices and teacher beliefs and attitudes. We are able to provide a copy of this research to you upon completion and hope that this will be of use to you.

**D.      (Timeline)**

The interview should take about half an hour.

**E.      (Information for interviewee)**

Neither yourself, nor your organisation, will be identified in this research. This interview will be recorded digitally and you may find my eyes looking occasionally at the recording device to check it is working. I will be writing notes throughout the interview as well. I will provide a transcript (or summary of findings if appropriate) for you to check before data analysis is undertaken.

If you agree to participate, you will be asked to sign a consent form. This does not stop you from changing your mind if you wish to withdraw from the project. However, because of our schedule, any withdrawals must be done within two weeks after we have interviewed you.

Do you have any questions for me at this point?

If you have any queries about the project, you may contact our National Postgraduate Director Dr David Parsons. He may be contacted by email or phone. Phone: 0800 Mind Lab (6463522) or (09) 964 4444. Email: david@themindlab.com

**F.        (Consent form)**

If you agree to continue with this interview, could you please sign this consent form stating that you have understood my explanation of the research and you give your permission to be interviewed and recorded.

**G.        (Transition)**

Let me begin by asking you the following question:

1.        What role(s) did you play in the leadership/followership of digital and collaborative learning initiatives in your school/work environment before enrolling in the course?

**Body (interview questions)**

We'd like to understand how coursework has been applied to your learning and what positive things have happened because of this. In order to do this, we have selected seven lenses (adapted from Sheninger, 2014) through which we might view your own digital leadership. So, to begin …

**Communication**

2.        Having completed the Leadership in Digital and Collaborative Learning course, how do you now use digital tools as a leader to communicate to stakeholders?

**Public Relations**

3.        As a leader, how do you use digital tools to take control of public relations to spread positive news?

**Branding**

4.        a) What characterises your and/or your school's vision of digital and collaborative learning and,

         b) how do you get your school's (or organisational) community to embrace this vision?

**Professional growth and development**

5.        How do you use both digital and face-to-face learning networks to shape your own professional development?

**Increasing engagement and enhancing learning**

6.        How do you ensure that technology supports effective and authentic learning in a particular context?

**Re-envisioning learning spaces and environments**

7.        What are the most important things you consider in setting up physical environments and technical infrastructure for learning?

**Opportunity**

8.        How do you identify and implement digital and collaborative learning opportunities for working with

partners from beyond the school community?

**Closing**

9.      What was the most important thing you learned from the leadership course?

## Notes

The seven pillars of digital leadership proposed by Sheninger (2014) have been associated with particular themes, sub-themes and key questions, as indicated in the table below. After careful consideration of the contents of the table, the questions posed during the body of the interview were formulated to elicit responses regarding each of the seven pillars of digital leadership. Where further probing is required in order to elicit more specific information on any one of the seven pillars, researchers are encouraged to use one or more of the questions posed in the 'key questions' column.

Table key: DCL = digital and collaborative learning

| 7 Pillars | Themes | Sub-themes | Key questions |
|---|---|---|---|
| Communication | Communicating progress, setbacks and successes in DCL transparently, honestly, accessibly and flexibly. | Communicating a DCL vision and strategy to stakeholders. Communicating progress, setbacks and successes honestly. Differentiated communication for different stakeholder groups and different accessibility characteristics. | How do you communicate the vision and plan for your DCL innovation to all stakeholders? How do you ensure that stakeholders are provided with honest, up-to-date information regarding progress, setbacks and successes relating to your DCL innovation? How do you design your communication to accommodate different stakeholder groups and access to different channels of communication? |
| Public relations | Using social media, as a complement to marketing communication, in order to tell your own positive DCL story. | To stakeholders To the wider school community Nationally Internationally To people outside of education e.g. political and business leaders | How do you use digital tools to communicate with stakeholders and the wider school community regarding your DCL innovation? How do you use digital tools to communicate with national and international audiences regarding your DCL innovation? How do you use digital tools to communicate with audiences in other industries (for example, politicians and business people), regarding your DCL innovation? |
| Branding | Community 'embracement' of BrandYOU and BrandINSTITUTION in DCL terms. | Definition of BrandYOU in DCL terms: Your own unique selling point in terms of DCL. Definition of BrandINSTITUTION in DCL terms: Your institution's unique selling point in terms of DCL Community 'embracement' of BrandYOU and BrandINSTITUTION in terms of DCL. | What special quality makes your own approach to your DCL innovation unique? What special quality makes your institution's approach to DCL unique? What do you do to ensure that the school community embraces your vision for your DCL innovation? What does your institution do to ensure that the school community embraces its vision for DCL? |

| | | | |
|---|---|---|---|
| Professional growth and development | Using personal learning networks and planned professional growth opportunities (both online and face-to-face) for DCL professional development.<br><br>(Definition: A personal learning network is a group of people with whom you communicate regularly, either online or face-to-face, in order to gain knowledge, advice, etc. regarding DCL). | Using personal learning networks for professional development relating to DCL.<br>Using regular, scheduled professional growth periods for professional development related to DCL. | What role do personal learning networks play in your professional development regarding DCL?<br>Are you able to schedule regular periods of time for personal professional growth and, if so, how do you use this time? |
| Increasing engagement and enhancing learning | Increasing engagement and enhancing learning through DCL. | Authentic learning experiences.<br>Technology that engages learners at all levels.<br>Finding the most effective technology for a specific teaching technique. | How do you ensure that your DCL innovation incorporates authentic learning experiences?<br>How do you ensure that the technology you use to support a specific teaching technique is both engaging and effective?<br>How do you ensure that every student has access to digital devices that enable personalised, prolonged use? |
| Re-envisioning learning spaces and environments | Re-envisioning learning spaces and environments that support authentic digital and collaborative learning. | Establishing a better vision.<br>Strengthening and opening up the wireless network.<br>A choice to teach and learn a different way.<br>A new building construct.<br>Creating a real-world space.<br>Strategic partnerships. | How does your vision for learning, drive the design of DCL spaces and environments in which you work?<br>How do you ensure that the quality of wireless connectivity supports specific learning activities you envision taking place in these spaces and environments?<br>How closely do these learning spaces and environments resemble the spaces that students are likely to encounter after they leave school?<br>How do you go about involving partners (both from inside the school and beyond the school walls) in the learning that takes place in these spaces and environments? |
| Opportunity | Forming DCL partnership networks beyond the school community | Community partners energised by the mission. | How do you identify and implement DCL opportunities for working with partners from beyond the school community? |

Table 1: Deriving interview questions from Scheninger's 'Seven Pillars of Digital Leadership'.

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# A PILOT STUDY INTO USE OF REGULAR SHORT QUIZZES IN A FLIPPED LEARNING CLASS

## HUGH WILSON
## DAVID PHILLIPS

## ABSTRACT

Flipped learning is an approach that has students develop a basic knowledge of a topic before it is studied. It allows class time to be spent on activities designed to build on that basic knowledge, enabling a better understanding of the topic. However, flipped learning does not work if the students do not complete the pre-class study provided by the tutor, as this results in the student not having the knowledge to benefit from the class sessions.

This pilot study looked at the use of short online quizzes at the start of each class session to address the issue of students not doing the assigned pre-class study, with the marks counting towards the final overall course grade. This approach was trialled on a Level 6 course in a civil engineering programme at a technical institute.

The research indicated that the approach resulted in more students accessing the pre-class resources, but many only did so within a day of the quiz, which did not allow time for deeper learning processes to be undertaken. This was reflected in these students having no visible improvement in exam marks.

The research has provided suitable data for a successful pilot study, with further work to be undertaken to more deeply understand and quantify outcomes. This work will also allow further student surveys to be undertaken that build on the data collected to date to improve the linkages between online resources and in-class learning.

## INTRODUCTION

Flipped learning involves students studying course content on a topic before they attend the class session (Roach, 2014). This results in the students arriving in class with a basic knowledge of the topic, which allows class time to conduct activities which foster a better understanding of the topic. This 'flips' the traditional approach, where content is presented in class and students are expected to develop better understandings of the topic through self-directed learning carried out after the class. The 'flipped classroom' has begun to revolutionise the way that students receive information from their teachers and is ushering in a new era of active and creative thinkers (Roach, 2014).

Students who do not come to class with a basic knowledge of the topic are unlikely to benefit from the class and will, most likely, spend all of the session trying to determine basic knowledge, rather than developing a deeper understanding of the topic (Gilboy et al., 2014). Therefore, one of the issues that needs to be addressed, in developing a flipped learning course, is how to encourage all students to do the pre-class study required.

One approach to encouraging students to do the pre-class work is to have short quizzes, based on this work, at the start of each class session. This research investigated whether using short, low-stakes (i.e. only a small number of marks allocated toward the final course grade), multi-choice quizzes at the start of each class session, in a Level 6 Construction Practices course, resulted in improvements in student pre-class preparation and exam performance. The research also looked at student views on the learning style so that an inclusive approach was utilised, which engaged the students in the research and outcomes, and provides conclusions and recommendations to enhance future learning outcomes.

## LITERATURE REVIEW

Flipped learning, with or without quizzes, has been identified as a popular approach with students. Many studies indicate that students often prefer to learn content online, rather than have it presented in a traditional lecture

(Angus & Watson, 2009; Dabbour, 2016; Gilboy et al., 2015; Lucke, 2014). This can be due to the ability of students to work at their own pace, to repeat some or all of the content presentation, and to study the content when they wanted. Roach (2014) found that students respond positively to flipped learning, and that it is an instructional design that is beneficial across student groups.

An important aspect of flipped learning is that in the class session they are able to fully participate in group or individual work using real-life scenarios and discipline-specific problems. Having peers all 'on the same page' is been identified as critical to peer support, networking, problem-solving and effective career-long learning and project delivery (Scott & Yates, 2002).

One advantage of regular quizzes is that they encourage students to keep up with the course content as it is presented, as opposed to binge-studying once or twice a semester when tests are due (Sales-Morera, Arauzo-Azofra, & García-Hernández, 2012; Angus & Watson, 2009) or falling so far behind that they cannot catch up through 'cramming'. Additionally, online quizzes provide immediate feedback to students about their level of learning, and help the tutor identify parts of the course content that students are struggling with and that require further explanation in class (Angus & Watson, 2009; Dabbour, 2016; Hagerty & Rockaway, 2012; Sales-Morera et al., 2012).

The effectiveness of quizzes in improving student performance is varied. Angus and Watson (2009) found that regular, low-stakes, online quizzes improved student learning, as evidenced in the final exam. However, other studies (Lucke, 2014; Dabour, 2016) show no correlation between the use of regular quizzes and student performance in exams and final grades. One likely reason among many possibilities (such as personal motivation, time, workloads, staffing, peer mentoring and extra-curricular commitments) for the lack of effectiveness could be the quality of the online study – students simply accessing the online material does not necessarily mean they are learning it. Lucke (2014) observed that most students in his study viewed the online material the day before the quizzes closed. He concluded that providing students with online content to be viewed before class results in many students learning only superficially, viewing the material just in time, rather than absorbing and processing the content properly.

## METHODOLOGY

### Background

The approach of using quizzes to encourage students to do the pre-class study was trialled with a Level 6 Construction Practices class in a civil engineering programme at a New Zealand technical institute in Semester 1 of 2017. Construction Practices teaches students how to plan and implement the construction of civil engineering projects, as well as related safety, quality and environmental-protection measures that need to be incorporated into the construction process. The course required students to learn a multitude of relatively simple facts and ideas and then be able to apply them to real-world scenarios.

The class consisted of 50 students, although two dropped out midway through the course leaving 48 participants in the study. The course is compulsory for both the New Zealand Diploma in Engineering (NZDE) and the Bachelor of Engineering Technology (BEngTech), and the class consists of students enrolled in both qualifications. About half the students had English as a second language.

### Procedure

The course was taught using a flipped learning approach, with students being required to spend at least three hours studying online videos and readings that were presented on the course's Moodle site a week before each class. Moodle is the online platform that the technical institute utilises for connecting with students to share course notes, slides, feedback and assessment submission. The classes consisted of one three-hour session held every week over a period of 15 weeks, with a two-week mid-semester break in the middle. Two of the class sessions were site visits with

no quizzes or formal class activities, but the remaining 11 weeks started with a 10 question, 10-minute online quiz that was accessed through Moodle.

Quiz marks and correct answers were released when the quiz closed. While the quiz was open book, it was designed so that students had to know where the relevant information was, if they were to successfully complete the quiz in the time available. Most students opted to do the quiz on their mobile phones although about 10% brought laptops into the class for the quiz. Paper copies of the quiz were also available for students who did not have internet-capable devices or who preferred to do the quiz on paper, an option which approximately 10% of the class chose. However, the paper quizzes were marked manually so students who chose this option did not get immediate feedback. The class sessions that followed had activities that usually required the students to plan construction works related to the type of civil engineering works that were being studied in that session.

The effectiveness of the flipped learning approach incorporating regular quizzes was assessed by a survey to determine students' reactions to this approach, how much pre-class work they did, and whether they considered the approach as beneficial to their studies. In addition, an analysis of the YouTube and Moodle records of the online content to determine the level of engagement of the students with the content before the class sessions and a comparison of the exam results with previous classes (Semester 1, 2016 and Semester 2, 2016) determined if there were any improvements in exam performance.

## RESULTS AND DISCUSSION

### Student survey

A paper survey was distributed to students in class in the last session of the semester, consisting of eight themed groups of statements relating to student views on flipped learning and regular online quizzes. The student survey was filled in by 26 students, which represented about half of the class. The results of the student survey are shown in Figure 1.

Of those surveyed, 68% showed a preference for the flipped learning approach using online resources (Question 1). Fifty percent said that studying the topic before class helped them understand the topic better, and a further 33% had no preference (Question 2). The opportunity to do more activities in class was preferred by 79%, with only 7% wanting the class session to consist mainly of content presentation (Question 3). The approach of having online content, which is tested each week, was considered to be a good idea by 85% (Question 8), showing a general appreciation of flipped learning with regular testing.

One concern was that regular quizzes would be more stressful for students compared with the previous practice of having a high-stakes (significant marks allocated to the assessment) mid-semester test. Students were divided on this issue, with 27% stating it was less stressful and 35% saying it was more stressful (Question 7). However, 85% of the students preferred regular quizzes rather than one mid-semester test (Question 4). This difference may be due to a lack of clarity around Question 7 of the survey in that it was not clear that it referred to the stress related to regular quizzes, as compared to one mid-semester test. However, some of the comments made in relation to this question expressed significant stress related to the high-stakes, mid-semester test.

The quizzes seemed to have some effect on students keeping up with the course, with 81% saying that having regular quizzes encouraged them to study the online content more than they would have if there had been no quiz (Question 5). Sixty-two percent also said that regular quizzes helped them keep up with the course work (Question 6).

**Student Survey Results**

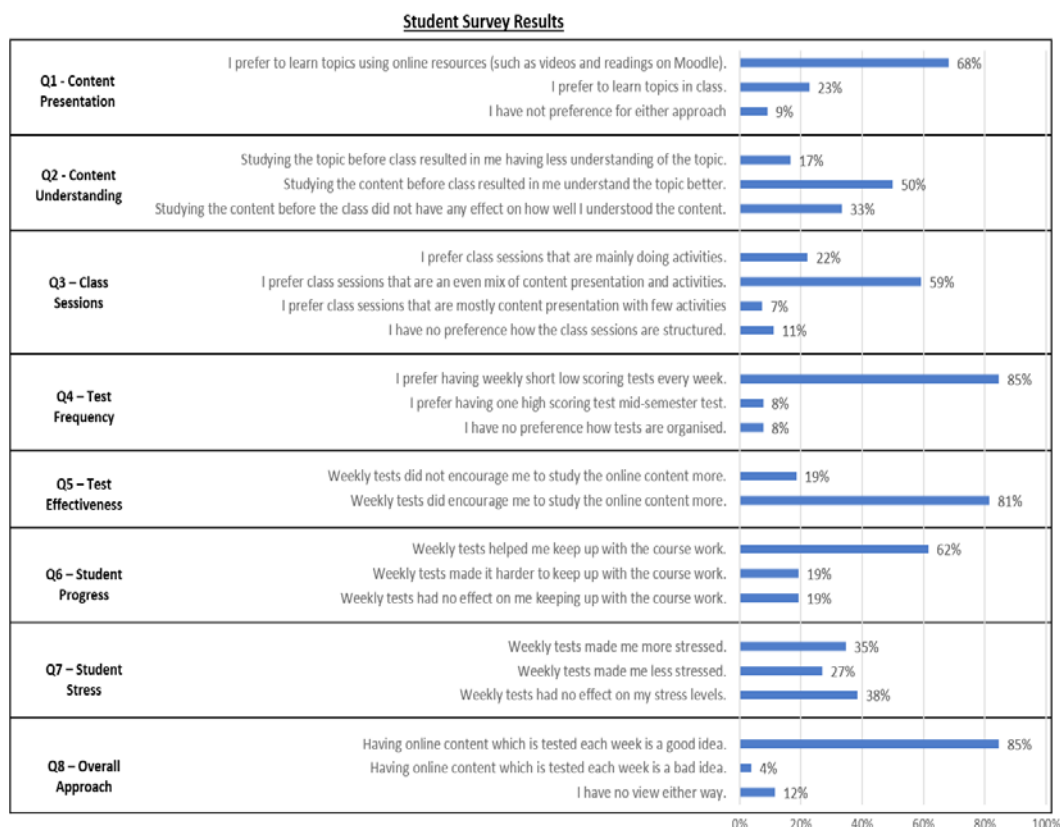| | | |
|---|---|---|
| **Q1 - Content Presentation** | I prefer to learn topics using online resources (such as videos and readings on Moodle). | 68% |
| | I prefer to learn topics in class. | 23% |
| | I have not preference for either approach | 9% |
| **Q2 - Content Understanding** | Studying the topic before class resulted in me having less understanding of the topic. | 17% |
| | Studying the content before class resulted in me understand the topic better. | 50% |
| | Studying the content before the class did not have any effect on how well I understood the content. | 33% |
| **Q3 – Class Sessions** | I prefer class sessions that are mainly doing activities. | 22% |
| | I prefer class sessions that are an even mix of content presentation and activities. | 59% |
| | I prefer class sessions that are mostly content presentation with few activities. | 7% |
| | I have no preference how the class sessions are structured. | 11% |
| **Q4 – Test Frequency** | I prefer having weekly short low scoring tests every week. | 85% |
| | I prefer having one high scoring test mid-semester test. | 8% |
| | I have no preference how tests are organised. | 8% |
| **Q5 – Test Effectiveness** | Weekly tests did not encourage me to study the online content more. | 19% |
| | Weekly tests did encourage me to study the online content more. | 81% |
| **Q6 – Student Progress** | Weekly tests helped me keep up with the course work. | 62% |
| | Weekly tests made it harder to keep up with the course work. | 19% |
| | Weekly tests had no effect on me keeping up with the course work. | 19% |
| **Q7 – Student Stress** | Weekly tests made me more stressed. | 35% |
| | Weekly tests made me less stressed. | 27% |
| | Weekly tests had no effect on my stress levels. | 38% |
| **Q8 – Overall Approach** | Having online content which is tested each week is a good idea. | 85% |
| | Having online content which is tested each week is a bad idea. | 4% |
| | I have no view either way. | 12% |

Figure 1: Student survey results.

## Moodle and YouTube analysis

The Moodle analysis consisted of downloading activity logs for readings and videos that presented the content that students needed to learn before class sessions. The logs extended back three semesters and so the activity in previous courses (Semester 1 and Semester 2, 2016) could be compared with the activity in the current course (Semester 1, 2017). The Moodle logs were analysed to provide an indication of how many individual students accessed the resource, and the number of times the resource was accessed each day.

The YouTube analysis involved accessing the YouTube analytics for each of the videos that had been viewed by students in Moodle. This provided information on how much of the video the students watched, at what point those who did not watch the whole video stopped watching, and what technological devices they used to view the videos. The analytics also provided a comparison of the results from the analysis of videos on Moodle.

Figures 2 and 3 show the percentage of the class from each of the three cohorts (Semester 1, 2016, Semester 2, 2016 and Semester 1, 2017) that accessed some of the online readings and video resources respectively. It is noted that readings were used more than videos, with students viewing readings averaging 82%, and students viewing videos only averaging 51%. In other words, on average, only half of the class viewed the videos (in all cohorts). Another observation is that a decrease in online accessing of the readings and videos occurred over all three semesters in the study. Potentially, students became busier with workload and other assessments, although further research is required to determine the specific reasons. Lastly the percentage of the class accessing both readings and videos increased in Semester 1, 2017 compared with previous semesters. This indicates that the quizzes were having some effect on getting students to view the online resources.
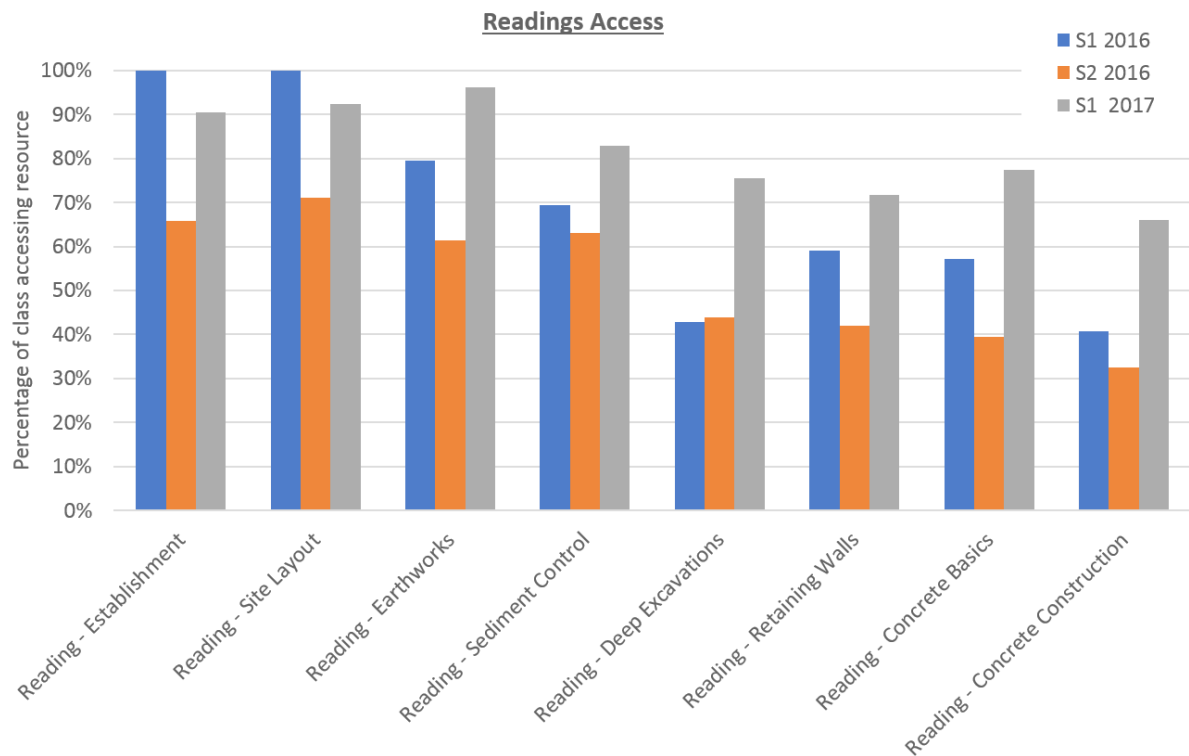
## Readings Access



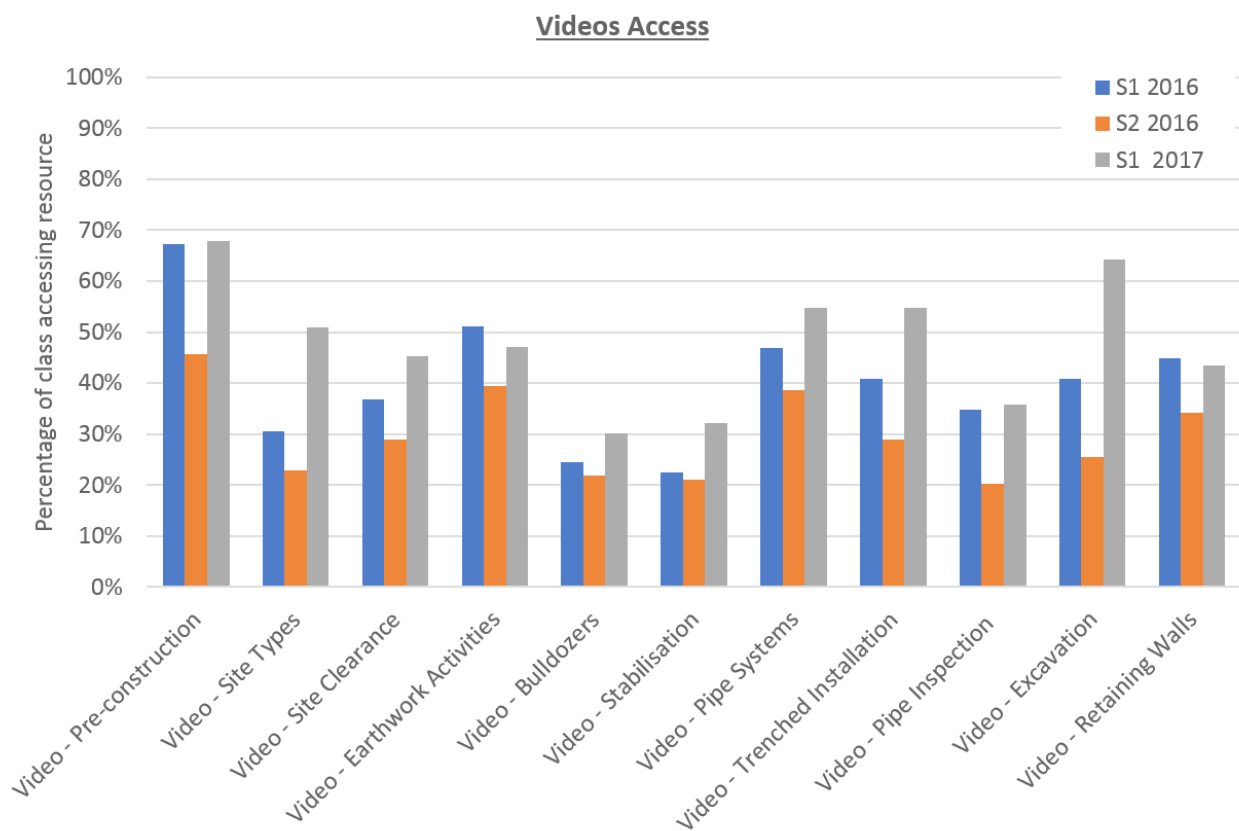Figure 2: Readings access.

## Videos Access



Figure 3: Videos access.

One output from the Moodle analysis was a graph for each resource, showing the number of times it was accessed each day. A number of students did access each individual resource many times, but this duplication was removed from the data. The graphs all showed a similar pattern in the number of daily accesses climbing steeply one to two days before the class session and quiz. Accesses also climbed in the days before projects were due and before the exam. Figure 4 shows a typical time-versus-access graph, with the relevant assessment events highlighted, and demonstrated a significant increase in the number of views between earlier semesters (Semesters 1 and 2, 2016) and Semester 1, 2017.

While the findings suggest that the quizzes did increase the number of views, it is questionable whether or not they improved the quality of learning. Figure 4 shows a high number of accesses on the day of the quiz. This was partially due to students having the resource open when doing the quiz, but also reflects students who started viewing the resource early on the morning of the quiz. A review of several of the logs indicates that approximately 25% of the students who viewed the resource only did so on the day of the quiz, which provides some evidence to support Lucke's (2014) observations that many students only view the material just before the deadline.
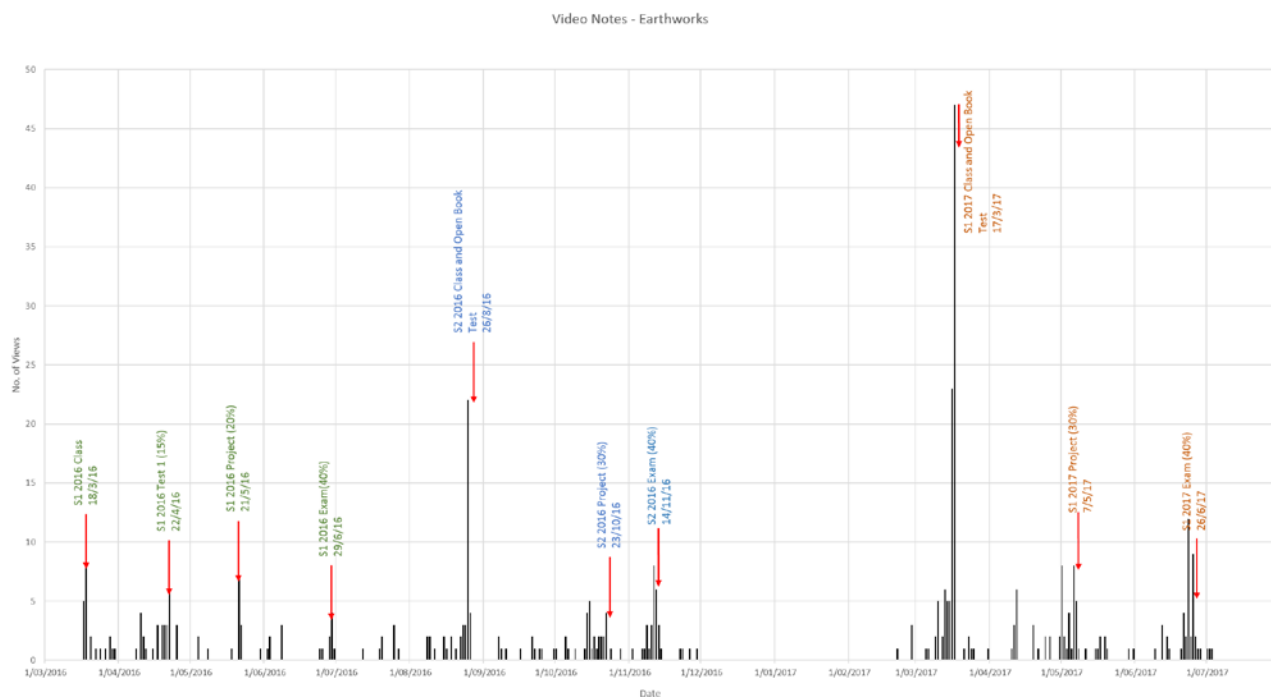


Figure 4: Sample of daily views graph.

## Quiz and exam marks

One measure of students' performance are the quiz marks. The average quiz mark for the Semester 1, 2017 class was 63%, which was lower than expected considering that the quizzes consisted of relatively simple questions directly related to the online content, and was open book. Another measure of performance are the exam marks. Figure 5 shows the exam results for all three cohorts. The Semester 1, 2016 and Semester 1, 2017 marks are similar, while the Semester 2, 2016 results are slightly better. Semester 2 results are usually better because that semester normally has a higher proportion of BEngTech students, who are generally more academically capable than the NZDE students. Overall the comparison of quiz marks and exam results in this pilot study (which did not consider wider variables such as workload and timetabling) indicates that the use of quizzes has not improved student performance.
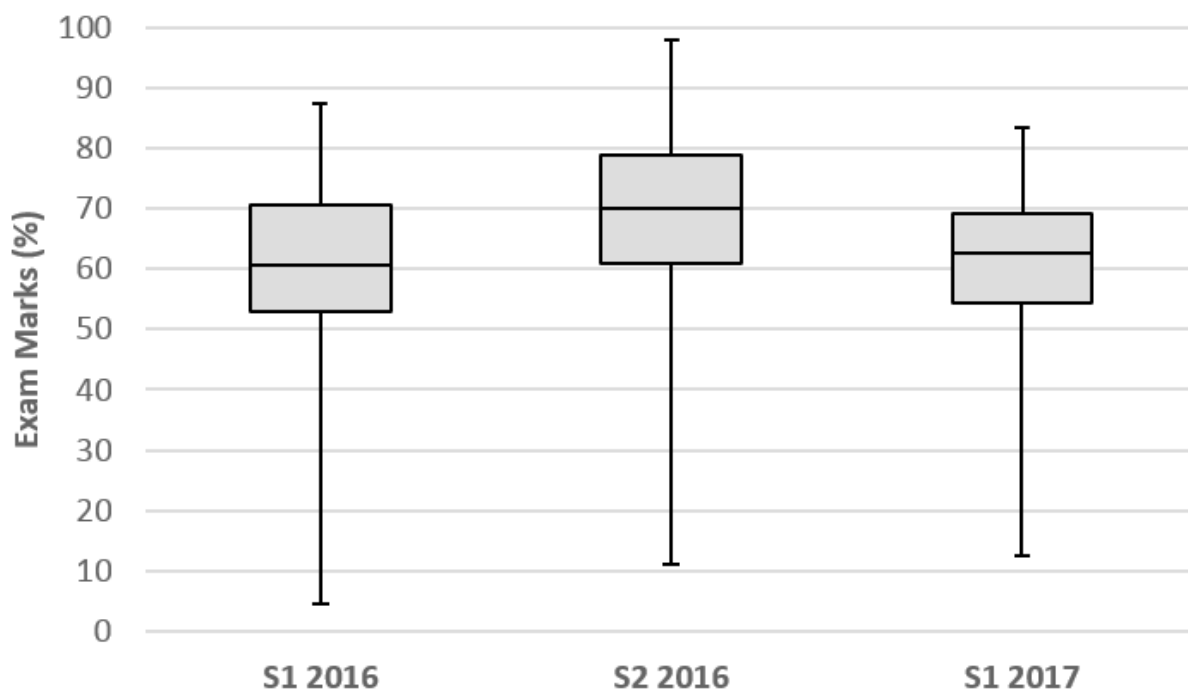
Figure 5: Exam marks

## Limitations

There are several limitations to this research. Firstly, the student cohorts vary considerably between years and some cohorts are noticeably more studious and some more academically able than others. For example, it was noted that the Semester 2, 2016 cohort was a high-achieving group. Another limitation is that the Moodle records used to measure students' engagement with the online resources only indicate whether a student accessed the resource, not how long or how productively they studied it. The YouTube analytics provide some information on the average time the videos were viewed for, but the quality of this viewing-study cannot be determined. Also, the research did not give consideration to student timetables and workload that may have affected how much time students were able to dedicate to the course.

Another factor that influenced the results was that the course started with one tutor who did not implement these activities very well, so the activities were not as effective as they could have been in helping students develop their understanding. The class was also too large for one tutor to properly engage with student groups. Another tutor was added late in the course and this enabled the class sessions to be more engaging.

## CONCLUSIONS

The main aim of this pilot study was to determine whether weekly, low-stakes quizzes would result in students studying the pre-class content before classes in a flipped learning classroom. The effects of these regular quizzes, the student view of the approach, and flipped learning in general were also of interest and will determine the direction of further research.

The benefits to student learning methods and outcomes from flipped learning has been extensively researched internationally, with a general consensus that students are more fully engaged and enjoy the learning process (Bristol, 2014; Wolf et al., 2015). Studies have also used analytics to measure the engagement (Salas-Morera et al., 2012; Lucke,

2014), and this method has been utilised in this pilot study to get a clear understanding of how the students made use of the online course materials.

The Moodle logs showed an increase in both the number of times each resource was accessed and the proportion of the class that accessed the resource as time went on. However, there was no corresponding performance improvement in exams. One reason for this may be that many students only looked at the online materials immediately before class, rather than reviewing and processing them throughout the week. This shallow learning approach did not equip them sufficiently to improve their performance.

Another reason for the lack of performance in the exam could have been the quality of the class sessions. The tutor was in the process of learning how to implement an active-learning approach, and the early semester sessions were therefore not as active as they could have been for enhancing the learning experience. Improvements in the implementation of the class activities may encourage students to be more interested in the subject, and perhaps be motivated to engage more deeply with the online resources.

Most students expressed a preference for the flipped learning approach, a result that has been concluded from other research into student preference for flipped learning (Gilboy et al., 2015; Roach, 2014) and preferred having regular low-stake quizzes rather than one high-stake, mid-semester test. This is an important finding as student preference is highly relevant to how well they learn – and this needs to be taken into account in future research and course design. Therefore, it is considered that this approach is worth pursuing in the future as it is easy to implement for the lecturer, is simple for the students to undertake, and provides motivation for students to maintain constant learning progress through the semester and be prepared for the in-class learning. However, additional methods, such as improved on-line engagement (for example, games, reflection points during videos and spot-questions), need to be developed to encourage students to adopt a deeper learning process.

## REFERENCES

Angus, S. D., & Watson, J. (2009). Does regular online testing enhance student learning in the numerical sciences? Robust evidence from a large data set. *British Journal of Educational Technology*, *40*(2), 255-272. Retrieved from: http://dx.doi.org/10.1111/j.1467-8535.2008.00916.

Bristol, T. (2014). Flipping the Classroom. *Teaching and Learning in Nursing*, *9*(1), 43-46.

Dabbour, E. (2016). Quantifying the effects of using online student response systems in an engineering ethics course. *Journal of Professional Issues in Engineering Education and Practice*, *142*(2), 04015010.

Gilboy, M. B., Heinerrichs, S., & Pazzaglia, G. (2015). Enhancing student engagement using the flipped classroom. *Journal of Nutrition Education and Behaviour*, *47*(1), 109-114.

Hagerty, D. J., & Rockaway, T. D. (2012). Adapting entry-level engineering courses to emphasize critical thinking. *Journal of STEM Education: Innovations & Research*, *13*(2), 25-34.

Kim, M. K., Kim, S. M., Khera, O., & Getman, J. (2014). The experience of three flipped classrooms in an urban university: An exploration of design principles. *The Internet and Higher Education*, *22*, 37-50.

Lucke, T. (2014). Using learning analytics to evaluate the effectiveness of the flipped classroom approach. In A. Bainbridge-Smith, Z. Qi, & G. Gupta (Eds.). *25th Annual Conference of the Australasian Association for Engineering Education: Engineering the Knowledge Economy: Collaboration, Engagement & Employability* (pp. 1156-1164). Wellington, New Zealand: School of Engineering & Advanced Technology, Massey University. Retrieved from https://www.researchgate.net/profile/Terry_Lucke/publication/270162113_Using_Learning_Analytics_to_Evaluate_the_Effectiveness_of_the_Flipped_Classroom_Approach/links/54a1e9760cf256bf8baf7b15.pdf

Roach, T. (2014). Student perceptions toward flipped learning: New methods to increase interaction and active learning in economics. *International Review of Economics Education*, *17,* 74-84.

Salas-Morera, L., Arauzo-Azofra, A., & García-Hernández, L. (2012). Analysis of online quizzes as a teaching and assessment tool. *Journal of Technology and Science Education*, *2*(1), 39-45. Retrieved from http://dx.doi.org/10.3926/jotse.30.

Scott, G., & Yates, K. W. (2002). Using successful graduates to improve the quality of undergraduate engineering programmes. *European Journal of Engineering Education*, *27*(4), 363-378.

Wolf, M., Wagner, M., Poznanski, S., Schiller, J., & S. Santeen. (2015). Not another boring lecture: Engaging learners with active learning techniques. *The Journal of Emergency Medicine*, *48*(1), 85-93.

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# ABSTRACTS

## Online Tutorial Libwizard Fosters Information-literacy Skills Among Civil Engineering Students at Unitec

*Norasieh Amin and Babar Mahmood*
*Unitec Institute of Technology*

An online information-literacy tutorial for final-year Civil Engineering students at Unitec was designed and implemented in early 2017. Previously, there have been issues with hands-on sessions due to large class sizes, low attendance and space issues. There was a need to improve practices, hence the author and co-author discussed and created an online tutorial, Libwizard. This online tool, a Springshare add-on, allows users to create online forms, surveys, quizzes and tutorials. The advantages of Libwizard are: a live website can be embedded, design features are not difficult to navigate, and results are downloadable for assessment. The online tutorial was designed to complement hands-on sessions, i.e. a flipped-learning strategy. The aim was to help students to decide areas for their project, use the engineering subject guide and various library resources, practice developing research questions and search using keywords and filters, refresh knowledge about referencing and consider referencing software use. After trialling by library staff, 33 out of 64 students participated, one week before the hands-on session. The results showed that most students had some skills including catalogue searching and using the subject guide. However, some students avoided using the referencing tool. In the conference, the authors will share their experience of designing and using the online tutorial Libwizard and their reflections on the experience. Feedback from conference participants could improve the practice as they plan a longitudinal study for the project.

## Student Perspectives, Virtual Welders and their Effectiveness in Developing Welding Skills

*Lee Baglow and Christopher Lovegrove*
*Unitec Institute of Technology*

Unitec Institute of Technology has possessed five virtual welding machines for several years. While it was appreciated that these machines had novelty appeal, their potential significance to learning was never fully investigated.

The use of the machines to promote learning was based solely on assumptions and informal observations. Therefore, there was a need to determine how to better utilise virtual welding in a high-technology learning environment.

The initial qualitative study comprised two groups of learners from the Certificate in Automotive and Mechanical Engineering Level 3 who undertook a blend of virtual and real machine welding. In Stage One, six learners from each group were invited to a focus group to explore their initial experiences of the virtual welders and how they considered the technology compared to real welding machines. In Stage Two, three students from each group talked through their welded test-pieces and reflected on their own performance. They were also asked to comment on their views of the value of the virtual welders as they gained additional practical experience.

The first cycle of this research identified that learners did value virtual welding technology, and that they found it to be extremely useful at the beginning of their welding experience. However, as they gained in confidence and improved skill levels, learners preferred to use real welding machines, indicating the changing dynamics of their constructive alignment.

The research team will present their initial findings and open a discussion on the effective use of virtual-reality technology in building welding skills.

## Weaving Our Worlds: Achieving equitable outcomes for Māori Health Sciences students at the University of Otago

*Joanne Baxter and Zoë Bristowe*
*University of Otago*

Since 2011 there has been a significant increase in the number of Māori students successfully completing Health Sciences First Year (HSFY) at the University of Otago. HSFY is a challenging academic course providing a pathway for successful students to enter into Otago's 'restricted entry' health professional programmes (such as medicine, dentistry, physiotherapy and pharmacy). In 2013 we identified that although a recently introduced Māori health science student success programme led to large improvements in Māori learner outcomes, these outcomes were not evenly distributed. Māori HSFY

students from areas of higher deprivation (NZDep2013) and /or lower decile secondary schools were less likely to enjoy academic success.

Weaving Our Worlds was developed in 2013 as a National Project Fund supported by AKO Aotearoa in partnership with the University of Otago. The project aimed to assess whether enhancements to the existing strengths-based Māori HSFY student-support programme would improve academic outcomes for *all* Māori HSFY students, including those from lower socio-economic backgrounds. Nine years of HSFY data from 2008-2016 were analysed. Additional qualitative data was also gathered from HSFY Māori students involved in the enhanced programme (2014 and 2015). Results show the enhanced HSFY support programme directly contributed to improved academic outcomes and an improved experience for Māori HSFY students, including those from lower socio-economic backgrounds and lower decile schools.

This presentation describes the Weaving Our Worlds project and the strengths-plus-evidence-based intervention. We explore qualitative and quantitative research findings from the project and discuss key learnings. The presentation discusses how more equitable outcomes for under-represented groups might be achieved by incorporating a strengths-plus-evidence-informed approach to support tertiary leaners.

## Assuring Health and Safety Learning Outcomes for Science, Medicine and Health Faculty Stakeholders by Using a Hybrid Learning and Hurdle Assessment Pedagogy

*Simon Bedford and Roza Dimeska*
*University of Wollongong*

At the University of Wollongong those responsible for workplace health and safety (WHS) understand the challenges involved in securing staff and student engagement when health and safety practices and induction efforts are widely seen as tedious.

The primary aim of this project was to get staff and students to a WHS threshold using a hybrid learning methodology that made the best use of face-to-face time. All learners covered the requisite knowledge and skills beforehand via an online module, including

a 'hurdle' assessment that ensured they had met the minimum and threshold learning outcomes.

This project used different designs to provide a range of engaging health and safety programmes including:

1. Laboratory inductions for large numbers of undergraduate students (using gamification)
2. Postgraduate students undertaking specialist equipment inductions
3. General WHS inductions for all faculty staff
4. Specific inductions for faculty staff

Different practices were employed depending on the target audience, but in all modules the key underlying pedagogy was to promote self-efficacy among learners to find out about health and safety for themselves rather than have it delivered to them.

We present evidence that each module made the most of any face-to-face interaction, and we assessed that the threshold WHS outcomes had been met and recorded. This resulted in a significant net saving of staff time. This work has promoted engagement in the topic and better long-term retention of health and safety requirements.

## Curriculum Transformation: Creating an alternative pathway in first year chemistry

*Simon Bedford and Glennys O'Brien*
*University of Wollongong*

With increasing numbers and diversity amongst student cohorts and no additional resources, we have had to look at ways to develop our curriculum so it can better meet the needs of all students and teaching staff.

Over the past 10 years we have transformed the first year chemistry curriculum to a dual-stream pathway featuring hybrid learning, collaborative learning environments and embedded assessment literacy. These changes have been based on proven pedagogy and a student-centred approach, with an action research cycle where each iteration has built upon the previous. The transformed curriculum is the culmination of several major and minor projects over a decade of Scholarship of Teaching and Learning. The new curriculum takes into account growing student

numbers, but delivers distinctiveness, coherence and clarity of purpose; addresses equity and diversity; and has a positive influence on student learning and student engagement.

The impact of these curriculum reforms has been evidenced in many ways. But perhaps most significant are those showing the outstanding results for students who enter without an HSc background in chemistry, but who complete this first year and then go on to be successful in the second year of their science course. This clearly demonstrates that we have generated an appropriate alternative pathway. In this presentation, we will highlight some of the curriculum changes we have introduced and why they have been effective, as well as some that have not.

We are greatly encouraged by increasing numbers of students committing to completion of the full three-semester foundation stream, even when it is not necessary for their programme. Finally, we both appreciate that this significant body of work has been recognised by the University of Wollongong with the overall Vice Chancellor's Award for Outstanding Contribution to Teaching and Learning in 2017.

## Interprofessional Learning in a New, Purpose-built Health Clinic: An ethnographic study of place and space

*Alexandra Bowmar, Sue McNaughton, Brenda Flood, Ailsa Haxell and Jane Morgan*
*Auckland University of Technology*

Interprofessional learning (IPL) occurs when two or more health disciplines come together in a patient-centred-care (PCC) manner to learn with, from and about each other (Centre for the Advancement of Interprofessional Education [CAIPE], 2002). Studies examining the influence of the built healthcare environment on IPL have identified both favourable and unfavourable environments for IPL. Researchers have reported on the use of previously-established spaces, mostly for one point in time, or post-occupancy.

This study uses an ethnographic approach informed by Actor Network Theory (ANT) (Latour, 2005) to explore the evolution of occupancy use of a purpose-built university-integrated healthcare clinic (AUT Health) by students and clinical educators with respect to IPL. An analysis of documentation, movement maps and

plans will complement a longitudinal collection of user interview data. These interviews aim to capture the perceived, conceived and lived experience of AUT Health, according to Lefebvre's spatial theory (Lefebvre, 1991). AUT staff who consulted with the designer will provide the perceived use of space. Conceived and lived experience will be gathered through observations and interviews of staff and students prior to the move in July 2017, during the initial weeks of settling in, and again after four months' occupancy. This research will provide a unique perspective to inform future planning of healthcare facilities to promote effective IPL and practice.

We will present the background, study design and initial findings of this study, including interview data, photos and movement maps at AUT Health, a purpose-built university-integrated healthcare clinic.

## Preparing Students to Communicate Science to Non-scientists During Natural Hazard Crisis Events

*Erik Brogt*
*University of Canterbury*

During a natural hazard crisis, timely and high-quality science and emergency management communication is critical. I will present results on a variety of science education and communication initiatives at or led by the University of Canterbury. With a team of scientists, hazard management academics, and educational researchers, we investigated how we can design and evaluate curricular innovations to prepare students in science and engineering, as well as professionals in the field, for their role as science educators and communicators in high-stress, scientifically uncertain natural hazard scenarios. Results show that the interventions increased students' communication confidence, self-reported competence, and their outlook on science communication shifted more toward that of experts.

## Experiencing G Suite in an Applied Technology Context

*Josh Burrell and Dan Taylor*
*Toi Ohomai Institute of Technology*

This workshop is a follow-up to the presentation,

Exploring Key Benefits of G Suite in Teaching and Learning, and uses Applied Technology as its context, although anyone can attend.

Participants will be taken through the Google Classroom workflow and experience from a student and teacher perspective how this software can be used as a teaching and learning tool. G Suite provides teachers with excellent tools for increasing the visibility of student work throughout the learning process, therefore giving them the ability to provide targeted and timely intervention and feedback to assist with student achievement. Participants will be guided through a typical learning activity in the applied technology area, starting from evidence being collected in the field using a mobile device, uploading to cloud storage, creating a presentation document, and the assignment submission and feedback flow.

## Assessing the Impact of a Cloud-based Learning Platform on Student Motivation and Ownership of Learning

*Gudrun Dannenfeldt, Jolanda Lemow, Kevin Stewart, Kay Syminton and Ricci Wesselink*
*Waikato Institute of Technology (Wintec)*

Has the KuraCloud learning platform increased student motivation and ownership of their learning? Cloud-based educational technologies are used with the expectation that they will assist students to become life-long learners. These technologies give students more control over their learning, and this has been shown to motivate them to work harder (Yurco, 2014). This research examines the impact of a recently-implemented cloud-based learning platform (KuraCloud) on student motivation and ownership of their learning. All students enrolled in the undergraduate Bachelor of Nursing programme at Wintec will be invited to participate in an online survey. Areas that will be explored to assess motivation include whether students feel more motivated, whether they feel encouraged to seek extra information about topics, and whether their participation is influenced by particular aspects and exercises within the KuraCloud lessons. Areas that will be explored to assess ownership of learning include whether the KuraCloud lessons helped them to learn independently, to problem-solve, and to understand the topic content and the lesson concepts. The research has not been completed yet,

but the results will be presented at the conference. It is expected that the results will inform future planning to enhance student motivation and ownership of learning using this technology.

## Embedding Ways to Enhance Employability Skills in Teaching Practice

*Gerard Duignan,[1,2] John Hitchcock,[1,2] Carmel Haggerty,[1,2] Agustilia Rodrigues,[2] Cath Fraser,[4] Brian Dillon,[4] Malcolm Hardy,[4] Deb Stewart,[5] Scott Casley,[5] Kate Ross,[6] Beverly Taylor,[1] Anne Webster[1] and Stephen Hannam.[7]*
[1] *Wellington Institute of Technology;* [2] *Whitireia New Zealand;* [3] *Universal College of Learning;* [4] *Toi Ohomai Institute of Technology;* [5] *Eastern Institute of Technology;* [6] *Nelson Marlborough Institute of Technology;* [7] *Taratahi Agricultural Training Centre*

This interactive workshop will explore an Ako Aotearoa Regional Hub funded collaborative research project undertaken by thirteen educational developers from seven Institutes of Technology and Polytechnics (ITPs). The project team sought to identify where and how teachers embed ways of enhancing their learners' skills for employability, lifelong learning and contributing to society. The Tertiary Education Commission (TEC) and other stakeholders seek evidence of the effectiveness of programmes of study in preparing graduates for industry. Inspired by keynote speaker Shelly Kinash at the 2016 NTLT conference, who described Australian research on university preparation for employability, the project team wondered how it might assist teachers in ITPs to design teaching and learning strategies for embedding skills that enhance employability. Literature revealed a concern about employability-skills gaps by teachers, institutions and industry, but very little about how this is being addressed in teaching practice. The research describes a number of case studies arising from classroom observations and interviews of a range of effective teachers, across various institutions, subject areas and NQF levels. The team referred to the Employability Skills Framework released by the New Zealand government in 2017, which identifies skills New Zealand and international employers say are essential for getting and keeping a job, such as positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience, plus other employability attributes.

The outcome of the research is a toolkit of commonly-

used practices titled *Guidelines for Good Practice in Embedding Employability Skills*. These are easy to embed into teaching practice and likely to be effective for learners in diverse contexts.

## Enhancing Generic Problem-solving and Thinking Skills of Tertiary STEM Students Through Puzzle-based Learning

*Tanya Evans and Sergiy Klymchuk*
*University of Auckland*

In this session we will give an overview of a project aimed at incorporating non-routine problem solving into university courses by introducing collaborative small-team problem-solving activities during traditional lectures. The non-routine problems that were used included puzzles, paradoxes and sophisms (PPS). The impact of the regular use of non-routine problems was evaluated as a pedagogical strategy to enhance generic problem solving and thinking skills of tertiary STEM (science, technology, engineering and mathematics) students. A significant number of tertiary STEM students drop out from their study during the first-year, not because the courses are too difficult but because, in their words, they "are too dry and boring". Terms such as *emotional disengagement* and *academic disinterest* have even been associated with STEM courses. The intention of using PPS in teaching/learning is to engage students' emotions, creativity and curiosity, and also enhance their critical-thinking skills and lateral thinking 'outside the box'. The theoretical considerations of the project were based on the Puzzle-Based Learning concept that has become increasingly popular worldwide. The impact of this pedagogical strategy was evaluated via comprehensive questionnaires, interviews and class observations involving 137 STEM students from four groups at AUT and the University of Auckland. The vast majority of the participants reported that the regular use of PPS helped them to enhance their problem-solving skills (91%) and generic thinking skills (92%). Moreover, 82% of the participants commented on other benefits of this pedagogical strategy. After analysing the observed overwhelmingly positive students attitudes we suggest that there is a need for further and more rigorous investigation of the suggested pedagogical strategy.

## Your Place or Mine? Is our Online Classroom a Public or Private Space?

*Jeni Fountain*
*Toi Ohomai Institute of Technology*

One student undressed, another one was having a whiskey and then there was the student who smoked throughout class whilst their child sat on their lap!

This behaviour would never happen in a face-to-face classroom but these incidents and more have happened in live-streaming online tutorials leaving tutors wondering – is this your place or mine?

For the past five years, the Legal Studies team at Toi Ohomai Institute of Technology (formerly The Bay of Plenty Polytechnic, New Zealand) has engaged in delivering programmes in an online environment. In the last four years, class tutorials have evolved from basic semi-interactive chat spaces to multi-faceted interactive tutorials incorporating webcams, headset microphones, small-group break-out rooms, recording capabilities and students streaming in domestically and from different time-zones internationally.

The team has engaged in numerous water-cooler conversations about classroom etiquette, expectations and how to manage the online classroom in order to keep staff and students safe. The recurring questions arise as to what are the tutors' and students' rights and responsibilities in a shared online teaching space, and how can we effectively define whether the space is public or private?

This presentation will share anecdotes of unexpected student behaviour in live-streaming online tutorials, although no identifying features will be included to protect their privacy. It will then discuss the challenges of creating safe shared online teaching spaces when participants are physically located in the privacy of their own home or workplace, a topic which will become increasingly important as the number of tertiary programmes offered through synchronous video-conferencing continues to rise.

## The Digital World and 'Being Inside': Administering the Literacy and Numeracy Adult Assessment Tool in prison

*Maree Gibson*
*Department of Corrections*

Like other providers of pre-degree courses in Aotearoa New Zealand, the Department of Corrections is required to administer the Literacy and Numeracy Adult Assessment Tool (LNAAT) to its learners. The LNAAT was primarily developed to assess the literacy and numeracy skills of adult learners enrolled in courses described as fitting on the National Vocational Qualifications framework (levels 1-3). However, unlike many of the adult learners 'outside the wire', the majority of learners in this country's prisons have no internet access. As an education tutor who currently spends her days in one prison site, this presents a raft of challenges when it comes to administering the LNAAT. For example, one particular concern is the amount of time taken to manually enter results. However, in the last two years, the Department of Corrections has introduced Secure Online Learning (SOL) suites into most prison sites in Aotearoa New Zealand. Prisoners are able to gain (albeit limited) access to a range of internet sites and Microsoft Office. Consequently, incarcerated learners sometimes have the option of completing LNAAT assessments in the SOL suites. Whilst the SOL roll-out has been small-scale, it has meant that it is now possible for learners to sit the LNAAT assessments in a computer suite. Historically, the paper-based assessment was the only option.

Underpinning this poster is a questioning of the theoretical assumptions about literacy that discursively frame the LNAAT. It draws extensively on Richard Darville's (2011) notion of the "literacy regime".

## Making the Most of Lecture Spaces

*Amanda Gilbert*
*Victoria University of Wellington*

Although authors have been predicting the demise of the lecture for many years, the spaces in which this 'outdated' form of teaching has been conducted are often an integral part of the architecture of most tertiary campuses. More often than not lecture rooms are tiered and have rows of fixed seating, facing towards a lectern and one or two screens. Though many teachers use these spaces as they always have done, maybe switching from OHTs to PowerPoint or to document cameras over the years, a growing number are working to turn these spaces into active learning environments. In so doing they must battle the affordances of the rooms themselves, and persuade students to engage in active learning exercises and to face one another rather than direct their attention to the front of the room.

This workshop is based on observations of lectures in a study carried out in the USA, Canada, the UK, Slovenia, Hong Kong and New Zealand in which I attended lectures in different universities to gain understanding of the ways in which these large teaching rooms were utilised. These observations formed part of an ethnographic study of lectures and lecturing in which I also conducted interviews with teachers in a variety of disciplines. Using examples taken from these observations and interviews, I will encourage participants to explore their own uses of these large-group teaching spaces and to consider how courses and teaching might make better use of the learning opportunities afforded by them.

## Collaborative Approaches In The Practice Of Te Reo Māori In New Zealand Early Childhood Services: Exploring student teacher narratives

*Sujatha Gomathinayagam*
*Whitireia Polytechnic*

In Aotearoa New Zealand, *Te Whāriki* (Ministry of Education, 1996), the childhood curriculum document, asserts that all early childhood settings should be committed to promote te reo Māori (the Māori language) and affirm its value for all children. This presentation is based on the results of an action research (Masters Thesis) which explored student teachers' experiences about the attitudinal, pedagogical and contextual factors which impact the teaching and learning of te reo Māori. This research adopted a qualitative Kaupapa research methodology (a Māori way) and interpretive approach to gather the narratives of six student teachers through semi-structured interviews. Rose Pere's Te Wheke (octopus) health model, adapted to education, informed the thematic analysis. Four out of the eight tentacles of the wheke, namely wairua

(spirituality), whanaungatanga (family relationships), mana ake (identity of individuals), and whatumanawa (open and healthy expression of emotions) were used to interpret the findings (Pere, 1991).

The findings of the research revealed that language learning is fostered in social contexts through collaborative approaches. For student teachers, the connections made between their identity and te reo Māori, their relationship with other teachers, and the links they established with parents and community emerged as powerful influences on their practice of the language. Engaging student teachers in reflective practices which nurture their spiritual dimension, and empowering them to be strong in te ao Māori concepts so that they articulate them in the very language that they are in, is a powerful way forward in the practice of te reo Māori.

## Virtualising the Stories of Ngākau Māhaki

*Victor Grbic*
*Unitec Institute of Technology*

This presentation shares a recent research project that investigated how mātauranga Māori, recorded histories and events associated with Unitec's Te Noho Kotahitanga marae can be shared within a digital space. The challenge was to model a digital repository that could meet the needs of Unitec's diverse and changing learning community, while upholding the cultural integrity of Māori partners. Key questions explored were: what are the implications for storing taonga and mātauranga Māori within digital spaces, and how might Māori processes of engagement with and on the marae be transposed to a digital space? Kaupapa Māori approaches framed the research methodology and, because of this, Māori knowledge and interests in the design of the prototype website Te Rua were privileged. The Māori research partners' recommendations were supported by research into current digital media platforms and tools associated with indigenous content and cultural heritage projects.

The iterative and collaborative research approach concluded that taonga and mātauranga Māori can be successfully transposed to digital spaces. The Te Rua website will thus be presented as a virtual learning environment in which Māori partners and content owners have an ongoing role in the design process to ensure student access and engagement with taonga aligns with tikanga Māori.

## More Than Pushing the Right Buttons: Professional development for teachers in new collaborative learning spaces

*Karen Haines*
*Unitec Institute of Technology*

Higher education institutions across the world are developing new classroom spaces that allow for more flexible active learning, often using technology. However, such spaces are only as good as the teaching and learning that occurs in them (Lippincott, 2009). This session briefly outlines how we have supported teachers to use new collaborative learning spaces recently built at Unitec. Teacher users are from multiple programmes and pathways across campus. Layout in these new classrooms encourages group work using Computers on Wheels and whiteboard, with software to support interaction between learners and teacher.

Professional development for teacher users has centred around pedagogical and technology support for using the new spaces, with a focus on the engagement of students in collaborative activities to support learning. The Concerns-Based Adoption Model (George, Hall & Steigelbauer, 2006) is examined in relation to professional development opportunities we created, including hands-on induction sessions, the establishment of a community of practice and multiple resources developed to support teacher users over the period of the first 18 months of new learning spaces at Unitec. The value of using this model to frame staff development for collaborative learning spaces is discussed, with a suggestion for how it can be extended to better understand how teaching and learning can be supported in new spaces.

## Veterinary Nursing in the Pacific

*Laura Harvey*
*Unitec Institute of Technology*

Authentic real-world learning situations provide students with opportunities to learn and practice practical skills.

Each year, Unitec organises an animal vaccination and desexing clinic in Tonga in collaboration with

South Pacific Animal Welfare. This credit-bearing experience provides veterinary nursing students with the opportunity to apply the theory and skills they have learnt to a high-pressure real-world situation, alongside veterinarians and qualified veterinary nurses. The week-long clinic involves students dealing with primarily companion animals (cats and dogs), although the odd pig and horse has been treated, averaging almost 200 surgeries over the week.

Over the past four years, 48 students have participated in the field trip, with another 14 students enrolling this year. Results from an online post-trip survey (conducting at the end of each trip) evaluating the students' experiences (n=24) showed that more than half (67%) of the participants surveyed gained confidence in themselves and their abilities. Ninety-six percent reported that they had learnt skills that they believe to be vital to their future success as veterinary nurses, including intubation of anesthetised animals, placement of IV catheters and calculation of drug doses, as well as 'soft skills' like improved communication and time management.

This field trip has shown how students may benefit both personally and professionally from their participation in an authentic work-based learning situation.

## The Nature of Effective Teaching-learning Spaces: Through the lens of the lecturers

*Susie Kung*
*Manukau Institute of Technology*

This presentation is based on a research inquiry which adopted a phenomenological research approach, using appreciative questions, to explore lecturers' best teaching-learning experiences. The participants in this research were academic lecturers currently teaching in a particular undergraduate Early Childhood Teacher Education programme in New Zealand. This research builds on previous research which focused on students' experiences of the same topic (Kung & Giles, 2014). The findings of this research reveal the significant importance of lecturers' deliberate preparation of a place and space for learning, the value of experiential and narrative pedagogies, and finally the priority of narratives and stories as foundational to teaching and learning. This research indicates the importance of experiential and narrative pedagogies for effective and meaningful collaborative learning. The earlier research, which captured the students' voices on the same topic, concurs with this key finding. The findings from both research projects have provided insights into the best tertiary teaching-learning experiences from both the main actors, the lecturers and the students. It is proposed that as teacher educators prepare student teachers to teach for the future world, there is a strong signal that the student-lecturer relationship and the dialogue that happens in community is the mortar that holds effective tertiary teaching-learning spaces together.

The presenter will provide a brief backdrop to the current research and then compare the key findings for both the projects. The floor will then be invited to engage in dialogue on the implications of the findings to all involved in tertiary teaching.

## The Use of Digital Notebooks for Learning and Knowledge Sharing in Group Projects

*Kwong Nui Sim*
*Victoria University of Wellington*

This presentation proposes a group work strategy/practice through a technological collaborative space, namely the digital notebook (e.g., OneNote and EverNote). One of the key learning outcomes for our students is to develop their abilities to communicate what they have learnt in the course. A common way of such communication is through a group project and recent studies (e.g., Tsay & Brady, 2010) show its importance in today's higher education. This is because students learn by communicating their ideas to others and by learning from their peers (e.g., Boud, Cohen, & Sampson, 2014). Nevertheless, while we tend to focus on the outcomes of the 'end-product' (i.e., the group project as written by students), most of us could have overlooked the support our students need in the process of completing the assigned group project. This is, in particular, the development of effective group interaction in working on a group project, which leads to vocational skills (e.g., digital literacy and project collaboration). By using a digital notebook in group projects, the transparency of the support could be achieved through the increased interaction between students and students, as well as between students

and teachers. This in a way demystifies the processes or the struggles of the students involved in a group project. In summary, a simple yet suitable technological collaborative space could allow a teacher to have insights into the activities of the student groups, and for students, the space provides them the opportunities to collaborate with peers while receiving guidance from the teacher.

## Designs for Learning: A pedagogical space for tertiary and vocational teaching in Aotearoa New Zealand

*Lisa Maurice-Takerei*
*Unitec Institute of Technology*

In *Skills for Work and Life* (2015) UNESCO identified vocational education and training as a key global priority for twenty-first century education. For New Zealand, as part of the global Technical Vocational Education and Training (TVET) environment, and one of UNESCO's member states, their vision for vocational education and training impacts significantly on the nature of teaching and education in this sector.

The importance of TVET to the development of a knowledgeable, skilled, adaptable and flexible workforce that engages in continuous learning is further outlined in *Unleashing the Potential: Transforming Technical Vocational Education and Training* (UNESCO, 2015). Indeed, the development of a workforce such as that outlined is a lofty goal for educators, and technical and vocational education organisations.

In order that graduates of TVET can take their place in the twenty-first century workforce outlined by UNESCO, some thought to the progress of the TVET workforce is required. Tasked with providing the opportunities that support the transformation of TVET and TVET graduates, the workforce requires an opportunity to revise and transform its own work.

This presentation considers the opportunities provided by the recent *Targeted Review of Qualifications* (http://www.nzqa.govt.nz/studying-in-new-zealand/understand-nz-quals/targeted-review-of-qualifications/) and the resulting review of Adult and Tertiary Teaching qualifications to reconsider the provision of TVET teacher education as a site for teacher transformation and revision. Opportunities for this area of teacher education to be broadened and

problematised rather than being seen as a site for the transfer of skills are outlined.

Teaching in TVET is envisioned as a cycle of activities wrought through wise decision-making based on relevant experience, learning and evidence. The session is based on a newly released text, *Designs for Learning: Teaching in Adult, Tertiary and Vocational Education*, designed to go alongside the new New Zealand Adult and Tertiary Teaching qualifications and promoted by Ako Aotearoa in a series of national workshops.

## Blended Language Learning in a Colombian Tertiary Context: A narrative inquiry of teacher change and curriculum innovation

*Jenny Mendieta*
*University of Auckland*

This study, from a narrative epistemological and methodological perspective, explored curricular innovation and teacher change by examining how a blended learning programme was put into action in a language-teaching department of a Colombian tertiary institution. In particular, the study aimed to identify and interpret the experiences lived out by a group of eight ELT teachers, each of whom held different positions within their community, as they grappled with and managed the changes brought about by their involvement in the implementation of the programme. It also sought to establish how these personal and collective experiences were influenced by broader organisational and institutional contexts of reform. Data were gathered in a natural setting for a period of sixteen weeks through regular contact with teachers, leaders, administrators and students. Data included narrative interviews, field notes from classroom observation, student questionnaires and official documents.

Findings indicate that switching to blended learning is a complex enterprise that goes far beyond getting the mix right, as many individual and context-specific situations come to shape the implementation experience. Depending on the extent to which their aspirations, beliefs and actions were consistent with the reality of their professional context, aligned to the expectations of influential others (Kennedy, 2013) and influenced by external factors, participants in this study

found it more or less difficult to develop ownership of their practice, feel emotional congruence and perform stable professional identities. In this presentation, I therefore discuss the ways in which tensions can be minimised so as to help language teachers and leaders deal more effectively with the contradictions and tensions arising in their practice as a result of the change to blended learning.

## Moodle Quizzes as a Way to Keep Students' Study Focus on Computer Science Course: A user study

*Natalia Nehring, Simon Dacey and Nilufar Baghaei*
*Unitec Institute of Technology*

Weekly feedback on assessments is a good way to improve students' study habits. Moodle quizzes are a way to help students focus on their workload every week and help provide encouragement to students to attend tutorial sessions regularly. Regular feedback can help increase student motivation and can ensure that students are on track with the course material. The aim of this study is to determine the effect of providing regular feedback on students' academic achievement. The sample group included 92 students from semester two 2016, 57 students from semester one 2017 level 5, the first-year, 33 students from semester two 2016, and 22 students from semester one 2017 level 7 Bachelor of Computer Science students at Unitec Institute of Technology, New Zealand. Weekly quizzes were introduced in 2017 with the aim of providing early regular feedback to students. The introduction of quizzes did not significantly improve the average marks on the formal assessment, however students value quizzes as time well spent and as formal feedback from their weekly work. Quiz completion significantly improved students' attendance during the morning tutorial session on the level 5 course. It is suggested that more study is needed to investigate how Moodle as a Learning Management System can guide, motivate and support students.

## Empowering Learning in Different Spaces Through Technology

*James Oldfield*
*Unitec Institute of Technology*

As the theme of this year's conference suggests, learning takes place in many different spaces through many different pedagogies. Technology can play a role in supporting learning across these varying contexts, and an argument can be made that technology will hold an increasingly important role in dealing with future educational challenges. The expectations of future students are likely to shift as technology becomes more ubiquitous and pervasive in our everyday lives. Many school students are already experiencing learning approaches that did not exist when their teachers last studied. Modern learning environments, mobile devices (BYOD), augmented reality and robotics are just some of the educational innovations students are experiencing in schools and are flagged by the *Horizon Report* as developments to watch in the tertiary education space. This presentation engages with these issues and provides a showcase of innovative approaches occurring at Unitec to meet the needs of these students.

## Echoing Staff Needs: Developing a model to support teachers using an active learning platform

*James Oldfield, JJ Purton Jones and Ken Liu*
*Unitec Institute of Technology*

The nature of many e-learning platforms is changing. More and more institutions are adopting multiple e-learning platforms and the requirements for staff capability are increasing. This paper investigates the development needs of teaching staff involved in a pilot of the new Echo360 Active Learning Platform. The Design Based Research (DBR) methodology is used to first identify the key considerations for professional development of such a platform. These needs are uncovered after conducting a focus group with the pilot members. The findings of the focus group are used to develop a model for the provision of future support and guidance. The use of the Community of Practice model is proposed to support future users of the platform. This will be iteratively monitored and adapted through the later stages of the DBR study and

reported on in future papers.

## A Proposed Model for Flexible and Responsive Pre-admission Criteria

*Sue Palfreyman, Tim Friedlander and Jayne Mercier*
*Unitec Institute of Technology*

Tertiary students are a diverse population bringing a range of skills and experiences to their study. However, most programmes of study assess suitability through set pre-admission requirements, which are usually based on the number and type of NCEA credits. The assumption is that this will support academic preparedness for tertiary study, and therefore success.

Based on the results of a sequential mixed-methods study undertaken in the Health and Community Pathway at Unitec, that explored the relationship between pre-admission qualifications and performance within the osteopathy programme, this presentation proposes a new model of setting pre-admission criteria. This model is more responsive to the diverse skills and experiences that polytechnic students bring and may be more reflective of factors that impact student success identified in this study and in the literature.

The presentation will outline the model and how it may be applied in health-related programmes, where both academic and people skills are required. It aligns with the responsive spaces strand of the conference, as it suggests a more flexible and responsive approach to assessing the diverse skills of students before they begin study.

## Closing the Gap: Using virtual reality to implement a high-tech learning environment

*Kamuka Pati, Alan Warburton, Leni Fifita and Joseph Pitovao*
*Unitec Institute of Technology*

This presentation examines the way in which the use of virtual reality (VR) tools enables learners to inhabit a 360-degree space that otherwise they would not be able to access. Feedback from building construction students has shown that many have previously been unable to develop a holistic understanding of the authentic workspace environment and construction techniques without being able to see them in reality.

In order to explore students' reactions to this virtual world, existing models and footage were imported into VR software, allowing the students to engage in the virtual world through the use of headsets. This process was available either in the classroom or via self-directed learning, and their responses subsequently obtained through interviews. The feedback showed that students engaged strongly with the high-tech environment, which initially captured their attention due to the novelty of the tool, but subsequently led them to gain a better appreciation of the workplace and building processes. This has allowed learners from a variety of backgrounds to appreciate the complexities of flow patterns in building work.

The presentation will include the experience of VR headsets, and suggest ways that the use of these innovative tools can be used with alternative stakeholders within the wider construction community.

## Standing to Learn and Teach: An investigation of standing versus sitting on cognitive performance

*Lucy Patston and Nikki Hurst*
*Unitec Institute of Technology*

Sedentary behaviour is extremely prevalent in Western societies and is significantly associated with an elevated risk of all-cause mortality that cannot be mitigated by physical activity. The introduction of standing desks into learning and teaching workplaces offers a solution to this inactivity, but there is limited investigation regarding the effects of standing on cognition. Cognitive effectiveness is, of course, a major consideration in the learning environment. In this study we aimed to provide an exploratory investigation on the effect of standing to work on cognitive performance. We tested 30 office-based adults on a battery of 19 cognitive tasks (tapping five cognitive domains) in a randomised, repeated-measures cross-over design study. Two conditions (standing versus sitting) were investigated over two 7.5-hour simulated work days, including morning, midday and afternoon sessions. Effects were analysed using multivariate two-way repeated-measures ANOVAs. Overall, after correcting for multiple comparisons, there were no differences in performance between sitting and standing. At

an uncorrected level, however, significant effects of condition (sitting vs standing) were found in three of the 19 tasks, with all demonstrating better performance while standing. Importantly, these results suggest that standing is not detrimental to cognitive performance. They also provide an initial indication that there may be cognitive benefits to standing in the attention and working memory domains, which are imperative for learning. This may be a promising avenue for future inquiry in the tertiary and school sectors.

## The Possible Effects of Smart Cities on Students' Learning Space in the Future

*Bahram Pishravi*
*Toi Ohomai Institute of Technology*

The concepts of smart cities and efficient urban design are being embraced around the world and many countries around the world have implemented a limited version of the smart cities concept.

Information technology, efficacy, integrated data management, automation, digital economy and facilitating all services are some of the many different characteristics of smart cities. Smart city developments in different regions are also occurring at many different levels, for instance city water systems, smart transport and smart tourism. Urban expansion is also seeing the expansion of smart cities features.

Another facet of smart cities is smart education. Back-end aspects of smart education are described in the limited literature on this topic, although as yet there are no reports on any fully-implemented smart-education projects. In this presentation the smart cities concept will be explained and its possible relationship with the education system as smart education will be discussed. The possibilities of smart-education implementation within smart cities, its impact on students' learning capabilities and its impact on teaching techniques will be at the core of this presentation.

This is a conceptual paper and it is based on a concept which is still under research and development. The methodology for this research is based on extracting concepts from thought-provoking literature and comparing those to currently-implemented smart cities. A possible cognitive model will then be developed into a model of smart education.

## "Shake it up baby now"*: How earthquakes changed my perspective on teaching

*Suzanne Pitama*
*University of Otago, Christchurch*

The purpose, places and roles of tertiary education have changed dramatically over the last 30 years, but the learning spaces have not changed. So how do you apply teaching pedagogies that are focused on transformative learning, in teaching spaces that were designed only for information dissemination?

This korero will illustrate how the Maori/Indigenous Health Institute (MIHI) teaching team has navigated such challenges within our institution, including the influence of teaching courses through over 20,000 earthquakes.

*Words from the famous Beatles song, written by Phil Medley and Bert Berns.

## Social Media for Learning and Teaching

*Inna Piven, Maryann Lee and Robyn Gandell*
*Unitec Institute of Technology*

With the advancement of internet technologies, e-learning is no longer limited to educational online systems, but now extends to social media sites such as Facebook and Twitter. Social media platforms are often the communication tools of choice for students, enabling learners to connect with much wider audiences within global online communities of learners. Whilst there is a shift to the use of social media in tertiary education, the research in this field of learning and teaching is still emerging. Our presentation highlights a qualitative research project and provides a snapshot of the state of social media in learning and teaching in tertiary education. We have gathered data from learning designers and lecturers into the ways they use social media in both course design, and learning and teaching practice. A key component of our research method was the use of a closed Facebook group that reflected online learning practices to support a community of learners. The presentation will benefit educators who are interested in exploring ways and developing new tools to enhance their current practice, by introducing social media into their learning and teaching. We will also discuss the

opportunities and challenges for using social media in tertiary education settings.

## From Tupac to Tane Mahuta

*Simone Poi, Karina Terekia, Alyssha Maynard-Wilson and Zella Toia-Preston*
*Matapuna Training Centre*

This integrated project-based learning initiative was developed by Youth Guarantee (YG) staff, designed specifically for our Youth Guarantee students who are strongly influenced by black American gang culture and give no value to their own.

The importance of our work is to inspire learners and staff to embrace their cultural identity, using and valuing Māori Literacy practices, responsive spaces and pedagogies that uplift self-identity, and value being Māori and Pasifika. The practical issue we hope to solve through our project was the revitalisation of our learners' and staff's mana by illustrating the beauty of the Māori and Pasifika cultures. We visited local marae within the boundaries of Tūranganui-a-Kiwa, along with significant historical and cultural landmarks, where korero and whakapapa were shared by local kaumatua and whanau. Our rangatahi (participants) were aged 15-21, predominantly Māori and Pasifika, with no formal qualifications, with drug and alcohol dependencies, from low socio-economic backgrounds, with many involved in the justice system and Child and Adolescent Mental Health Services (CAMHS). Noticeable changes we found with our learners and staff were an improvement in attitudes towards collaborative learning, stronger sense of whakapapa and belonging, strong sense of whakawhanaungatanga (building relationships) and tino rangatiratanga (self-determination). Knowing one's culture is integral to Māori and Pasifika learners. Our findings illustrated that when our learners found out who they were and where they came from, they were able to confidently set about determining their own futures. We believe that our Ko Au project may be of use for others working with at-risk learners who have disengaged from education.

## Creating Safe Spaces for Undergraduate Nursing Students in a Dedicated Education Unit: Communities of practice

*Leanne Pool[1], Deb Leuchars[2], Ruth Crawford[1], Kathy Trezise[3], Alexandra Wordsworth[1], Anjana Naidu[3], Laura Tosswill[3] and Adelaide Jason-Smith[3]*
*Whitireia New Zealand (1), Massey University Wellington (2), Capital and Coast District Health Board (3)*

This presentation reports on a collaborative research project developed to support clinical learning experiences for three undergraduate nursing programmes from Massey University Wellington and Whitireia New Zealand Tertiary Education Providers (TEPs) working with Capital and Coast District Health Board (CCDHB). The Dedicated Education Unit model (DEU) was proposed by the DHB as the most suitable tried and proven option to support student learning by developing a community of practice approach. Both TEPs agreed to work in a collaborative partnership to implement and evaluate the DEU model.

A mixed-method approach was used to gather data for this study, initially using a staff and student survey and focus groups involving the Registered Nurses, Clinical Liaison Nurses (CLN), Academic Liaison Nurses (ALN) and students.

A key finding was the development of a learning partnership between the CLN, ALN and preceptors, with the students at the centre. Students felt part of the team and engaged in learning partnerships with their preceptors and CLNs. After an initial settling-in period, students were described by staff as contributing and being part of the team. The students felt valued, and staff appreciated the partnership community of practice model. Communities of practice were also enhanced with students learning together from different tertiary education programmes, and staff from the TEPs and DHB working collaboratively to develop the project model.

This presentation is unique, as it will explore in detail how the communities of practice developed in response to the diverse learning needs of students from the Bachelor of Nursing (BN) and BN Pacific Programmes as they worked together over the third-year pre-graduate clinical placement.

## The Gordian Knot of Architectural Studio Praxis

*Annabel Pretty*
*Unitec Institute of Technology*

In Reyner Banham's 1996 essay A Black Box: The Secret Profession of Architecture, he discusses the proposition of architectural students' necessity to be socialised into their profession. The manifestation of this is via the "Architectural Studio", a place dissimilar to that in any other teaching paradigm in the Western world, more akin to an anthropologist's view of a tribal longhouse.

This studio context, or rather innovation in architectural teaching, follows a bifurcated path; that of innovation of materials and technology, and innovation of practice regarding teaching. Is it possible to inculcate both of these paths to students when teaching a studio programme and how can this manifest?

This presentation aims to explore the innovation of teaching praxis within the studio context as well as drawing on threads in innovation concerning the materiality of the built form. Is it possible for both of these to coincide, tacitly being the Gordian knot – innovation of studio teaching and innovation of materiality – or is this aim too lofty to achieve? The presentation will reflect on five years of live prefabrication projects within the context of a second-year Bachelor of Architectural Studies programme, four years of live projects within the context of FESTA (Festival of Transitional Architecture) in Christchurch, and two years of Glow@Artweek Auckland, spanning the years 2012-2016.

## Urban Spaces Via the Lens of Architecture

*Annabel Pretty*
*Unitec Institute of Technology*

As often as not, the photographic image is carefully crafted and curated, showing only the most aspirational elements of the thresholds of the city and human interaction with buildings. Should one instead focus on the totality of the picture of user/consumer of the building and viewer/photographer, or conversely focus on the un-curated leftover spaces in the urban environment? How is it possible to draw on the deep empathetic threads that should connect the viewer

and consumer of the building to the actual building itself? Is it possible to show this in a sympathetic sense?

This presentation aims to make a visual critique, or aperçu, of both the empathetic and unsympathetic of these thresholds and transitions via a case study, run as a student project, using undergraduate architectural students to record and analyse these spaces photographically, within the context of Auckland's central business district. How can this analysis help architecture students better understand and empathise within their own design methodologies, and make for a more empathetic cityscape?

## Reo o Ngā Atua – RONA: A collaboration of wāhine drawing upon the energies of RONA to deliver a presentation within the field of early childhood education

*Tanya White, Losamalia Rose Penn, Yvonne Rongo Culbreath and Rangituohu Nathan*
*Unitec Institution of Technology*

Kupu, words, weave their way through time and space like the twining tendrils of the tahaa (gourd plant), descending upon this place, to settle upon this community of practice, kia mauri tau. Sealing the imprint of our DNA, mokopuna .

Papatūānuku grounds us, reminding us of our mission to transform the institutional space known as 'teaching and learning'. Sacred shared understandings of relational space or reverence of the relationship – Teu le Vaa is the cornerstone of 'who we are' as wāhine.

RONA proposes that through the principles of te ao Māori and te reo Māori our lived experience and delivery is framed by wānanga/talanoa. This creates 'safe' spaces for the wellbeing of ourselves as kaiako in the Bachelor of Early Childhood Education programme.

Our ancestral knowledge cannot be separated from the professional space. Connections to the whenua and the wai ground us in who we are, our identity, our place. We will share our stories of how we teach and navigate in this place, whilst maintaining the mana of our reo. Reconceptualising and remembering our interrelationships as tangata whenua and people of Te moana nui a Kiwa, through our connection with Papatūānuku, who is our 'teaching space'. RONA,

casting her light and maramatanga, guides this process.

## A Student-centred Blended Learning Design to Support First-year Undergraduate Assessment

*Bettina Schwenger*
*Unitec Institute of Technology*

As tertiary institutions in New Zealand increasingly offer learning in both face-to-face and online spaces, teachers voice concerns about how to appropriately integrate these spaces in their teaching. Not only can there be a need for technical help when staff explore how tools, potentially new to themselves and their students, may enhance learning, teachers may need to review their pedagogical practices, including how to support online assessment (Moskal, Dziuban, & Hartman, 2012).

My research explores how a student-centred blended-learning design may support students' assessment through online affordances (Conole, 2013). In collaboration with two teachers, we identified the course and assessment demands and responded by developing an in(ter)vention with four online resources for students.

The presentation reports firstly on characteristics of student-centred blended learning design. It outlines, secondly, the iterative process of creating an embedded digital information literacy in(ter)vention aligned with the assessment in a first-year undergraduate course, as part of such a design. I will share opportunities and challenges of such a design with the participants and am interested to hear their experiences in integrating teaching in online and face-to-face spaces.

## Using Facebook to get onto Students' Wavelength

*Orla Seymour and Rob Charlesworth*
*NZMA*

This 45-minute interactive workshop explores how Facebook can be used to your advantage by engaging students and creating an authentic learning environment that reflects students' way of thinking. Attendees will examine how this medium caters to students' needs for continual interaction online, and the facilitators will explain how Facebook can be

used to help learners remain engaged. Other uses of Facebook include creating a sense of group belonging, being able to deliver resources without students being present, being able to see when something is delivered and seen, and how Facebook can even be used for private discussions about lived experiences.

As learning spaces are increasingly moving online, tutors must look for ways of designing learning environments that meet the needs of twenty-first-century adult learners. Facebook is something that is free, accessible, authentic and ubiquitous. In terms of authentic learning spaces, there can be few as pervasive, fun and interactive, making this workshop a valuable look at twenty-first-century 'learning spaces' for the benefit of young learners.

## Flipping the Classroom for Information Literacy Instruction: Considerations towards personalisation and collaborative learning

*Jing Shen*
*University of Auckland*

This study is inspired by emerging research and practice on the flipped teaching method, along with new expectations on personalised learning strategy. The possibility of enabling personalised, collaborative information literacy instruction in a flipped class module was examined. Two-stage interviews were conducted before and after an interactive PowerPoint was given, which was designed according to the guiding principles of personalised learning and Online Collaborative Learning Theory. The study used a qualitative framework to gauge learners' perceptions regarding the effectiveness and feasibility of the design. Samples were taken from learners who have previously been involved in a flipped classroom. For the first-stage interviews, all five participants spoke positively about the prospectus of a flipped, personalised and collaborative information-literacy instruction. For the second-stage interviews, three out of four participants offered feedback. Despite the three participants responding favourably to the contents of the interactive PowerPoint, they all exhibited a degree of hesitation when multiple options were presented to them. They were still expecting clear instructions instead of taking ownership of the process. This study discovered a gap between learners' positivity towards

a flipped, personalised and collaborative learning model, and the fact that learners are fundamentally accustomed to the traditional learning path. This implies there are hurdles to overcome for the flipped model to be able to deliver results, especially when learners are expected to take more control over their own learning. This study calls for more research to seek practical solutions with regard to altering learners' mind-sets and embracing the full potential of flipped learning. My presentation will mainly cover results from the two-stage interviews, which will be compared and further discussed in light of Giorgi's phenomenological interpretations of learning.

## Things, People and Classrooms: A study of dialogue and blended learning in a vocational tertiary setting

*Ann Simpson[1] and Tom Nicholson[2]*
*[1]Unitec Institute of Technology; [2]Massey University*

Only 40-50 percent of students in vocational training institutions complete their coursework and graduate. Recent developments in blended learning may be a game changer in terms of increasing engagement and retention. Previous research has found that blended learning environments that combine face-to-face with online teaching are more effective than on their own. A blended-learning environment enables students to use the tools available to them, both digital and physical. This study will use student voices through dialogue as a window to their learning experiences and throw light on those factors that contribute to successful or unsuccessful learning. The sample for the study will include 18 students and three instructors from three vocational courses. The research involves tracking their progress through the 14 weeks of their course training. The researcher will move among students during teaching sessions, collecting mini-interview audio data relating to their understanding of activities and tasks they are completing. When studying online, students will keep logbooks of their learning interactions. Students and instructors will be interviewed. The findings will help instructors understand better the learning experiences of their students, and the findings will suggest ways to improve the learning experiences of students in vocational training programmes.

## Reforming Trade Programmes to Meet Entrepreneurial Practices

*Niranjan Singh and Jone Tawaketini*
*Unitec Institute of Technology*

This presentation intends to explore whether the trades teaching curriculum focuses sufficiently on the entrepreneurial skills needed by present-day vocational graduates, as evidence indicates that inclusion of entrepreneurial activities is limited or non-existent. According to Mok (2016), current degrees are failing to encourage employment, high earnings, and upward social mobility for graduates. This indicates that in addition to vocationally-specific studies, graduates need to know how to operate within a commercial environment. In order to clarify this situation, two data sources were analysed from the case study of a Bachelor of Applied Technology degree; firstly, learning outcomes that had direct entrepreneurship content, and secondly, related assessment packages that led to entrepreneurship. This analysis revealed that many courses lacked any business practice in their curriculum content or assessment. It became obvious that the programme did not satisfactorily meet the entrepreneurial needs of future employers. It is therefore recommended that, in order to equip students with effective entrepreneurial learning, more emphasis on business skills is required to add value to the industry they will work in. The presentation will examine the correlation between outcomes and assessment, and recommend strategies for addressing the gaps identified.

## Using Simulation to Prepare Medical Imaging Students for Practice

*Sharon Sitters, Charlotte Stott, Kate O'Callahan, Joanne Thorogood and Dale Sheehan*
*Unitec Institute of Technology*

Unitec is one of three providers of Medical Imaging Technology (MIT) education in New Zealand. Clinical practice serves as the pivotal component that brings the knowledge of medical imaging and professional perspectives together to deliver work-ready graduates.

Due to a series of policy decisions, Unitec students were no longer able to experience a first-semester placement. Feedback from stakeholders was that students were ill-prepared for their first placement.

To address this, we sought to use the Awhina skills and simulation centre, and a nearby radiology room in an associate hospital in close proximity to Awhina, to develop a multi-scenario simulation to improve preparedness of students for placement.

The six-station simulation focused on giving students the opportunity to develop a variety of technical and psychomotor skills, communication skills and professional attributes for successful transition into the clinical arena. We created a professional environment, with students wearing uniforms, and imposed a strict professional standard of behaviour to be maintained during the simulation.

To determine the effectiveness of this simulation, students will be surveyed at three intermittent points: immediately post-simulation, midway through their first clinical placement, and at the end of the academic year. End-of-placement feedback will be collected from the clinical tutors and industry stakeholders via questionnaire.

This presentation will describe the multisite simulation and the present the research findings.

## Mapping the Graduate Profile: How graduate attributes are covered in the curriculum

*Mark Smith, Sarah Kirk and Maura Kempin*
*Unitec Institute of Technology*

The 'space' where all students and teachers meet is the curriculum. In designing the curriculum, we want to create spaces that make for better learning. As part of its extensive design and redevelopment of courses and programmes (largely under the MRoQ umbrella), Unitec has been making informed decisions by analysing data collected on individual courses to gain a picture of the programme as a whole. Some of this work has helped to check the alignment of courses, teaching and assessment to the graduate profile of the programme.

The process has three steps, based on similar work done at La Trobe University in Australia.

1. Teaching staff report, on an eight-point scale, the extent to which graduate attributes are addressed in their course(s). This provides a profile of the graduate attributes across the programme.

2. Teaching staff report on whether an attribute is assessed or not, permitting a measure of alignment.

3. Academic advising staff report on the extent to which they see a graduate attribute evidenced in the documented curriculum and online resources.

The resulting report provides a heat map as an overview of a programme's graduate attributes coverage. The information from the process helps to provide direction for curriculum review and redesign, and will form some of the evidence to be submitted for NZQA consistency reviews.

This workshop will briefly demonstrate the data gathering and reporting process, and ask participants to consider how they might use this information in programme review and development.

## 'Mind your Mindset' for Learning (Educators and Learners)

*Marni Stevenson*
*Tertiary and Careers Group – ACG Education, Auckland*

As *mindful* educators in the vocational tertiary education 'space', we are confronted with diverse groups of learners, some of whom are 're-engaging' with learning after not prospering during their schooling, second-chance learners who have not felt the pleasure of feeling a sense of belonging before, learners who are balancing family and work with further study, and those who want to begin to re-imagine a future self. Our learners can be challenged by poverty, by learning issues and mindsets that do not always assist them in their learning journey. But they are not alone. We, too, are affected by such mindsets. Depending on the extent of our agency as educators, we may not even be aware of them. Mindful educators not only understand the limitations of fixed mindsets in their learners, but they use their 'observational brains' to work to diminish their own.

This workshop will explore mindsets for learning, for students and educators. We will look at the value of productive struggle for students, perseverance when the stakes are high, how we foster a learning environment that supports exploration and normalises mistakes, and how we encourage resilience and perseverance to ensure students do not get caught up on the short-term struggles and can engage for

the long haul. We will collaboratively explore educator actions that support a growth mindset in our learners as well as ensure we remain vigilant about our own fixed-mindset persona, which may come out to play when we engage in new learning, change, or other such high-stakes experiences. At the heart of this exploration is the mindful educator, who is prepared to be vulnerably themselves in pursuit of better outcomes for their learners.

## Leading an Authentic Stakeholder-informed Curriculum Design Process to Meet Learner Needs

*Susan Stevenson and Eliot Henderson*
*New Zealand Curriculum Design Institute*

In 2016 the UNESCO Director of the Bureau for Education, in a report, *What Makes a Quality Curriculum?*, stated the complexity of curriculum development [design] processes and the range of issues informing the 'what' and the 'how' of teaching, learning and assessment present major challenges for policymakers and curriculum developers. Since curriculum development processes are influenced both by local needs and by broader, transnational trends, a comprehensive international perspective on curriculum issues, trends and approaches is critical. (p. 6)

The report goes on to advocate for inclusive and comprehensive consultation with a broad range of stakeholders when designing curricula. The desire and capacity of tertiary education institutions to respond effectively to such guidance presents challenges. Learner needs are diverse, and effective authentic consultation with stakeholders requires sincere engagement and relationships. The session facilitators will conduct a consultative research process designed to support the creation of an authentically stakeholder-informed curriculum design. The process will also support the eventual programme quality level. The approach outlined has recently been used to support the design of a suite of postgraduate programmes in New Zealand. In this workshop the facilitators will outline their authentic stakeholder-informed curriculum design approach. They will then facilitate practical activities where participants can experience micro examples of the curriculum design approach utilised and reflect on its value in their own institutional contexts.

## Whare Tapa Rima: Leading inclusive and holistic learner support systems

*Susan Stevenson and Akshay Shukla*
*FREEDOM Institute of Higher Education*

Learning support staff and faculty in tertiary education institutions in New Zealand are now faced with supporting learners who are diverse in terms of ethnicity, culture, gender, age, religion, behaviour, socio-economic backgrounds and aspirations. In 2010 a team of largely Pasifika and Māori staff at a private Institute in South Auckland started to experiment with Mason Durie's (1994) holistic Whaiora Model to support their higher tertiary-education-level learners. Over time the team renamed the model Whare Tapa Rima, which reflects its five dimensions: spiritual, social, intellectual-emotional, physical and ethnic-cultural. While the team dispersed, two team members continued to apply and hone the model and its dimension descriptors. Now some six years on, as a result of continuous improvement processes, the model has undergone a range of philosophical, theoretical and practical developments, adaptations and applications. All changes have been designed to improve the model's capacity to more effectively build staff understandings and support tertiary-level learners. The action-research process undertaken by the presenters has been one of ongoing self-assessment, review and triangulation of evaluations from different sources. The presenters have now redrawn the model and expanded explanations of the dimensions portrayed to assist staff and learner understandings with a view to optimising and accelerating learning for all tertiary-level learners. A range of institutions and their staff teams have been introduced to, and commenced use of, the model. In this workshop the presenters will overview the model and provide those attending with an opportunity to build their understandings of the model and its dimensions in order to support their practice of the model in teaching and learning contexts.

## A Comparison of Business Students' Motivation to Learn Using Online Platforms Versus Social Media

*Kawtar Tani, Elizabeth Dalzell, Andrew Mock, Carin Wright and Anne Steele*
*Universal College of Learning (UCOL)*

Little has been done to assess the benefits of using online platform tools versus using social media in a tertiary education context. The institution in which this study, currently in progress, is being conducted uses the online learning platform Moodle to deliver curriculum and facilitate student learning. Using Moodle has proved useful insofar as students nowadays expect to be able to access course material online. However, the effectiveness of Moodle as an interactive learning tool within the institution has been questioned; it has been reported that students are not motivated to use Moodle to interact with lecturers. Although interactive learning environments are believed to increase student success, the majority of studies have investigated the effectiveness of blended classrooms or online environments rather than social-networking platforms that are commonly accepted and used by students, such as Facebook, Instagram and Twitter. This study, as such, explores the effect of Moodle and Facebook on business students' motivation to learn, and hypothesises that students will be more motivated to use Facebook over Moodle as a learning platform in tertiary education. Participants were students enrolled in the first year of the business programme, namely students taking the Accounting Principles course and the Communication Theory course. All participants were given access to both the Moodle online learning platform and Facebook, to use throughout the first semester of 2017, which lasts 16 weeks. Lecturers posted the same questions on Moodle and Facebook on a weekly basis, to which participants were asked to provide responses. All questions were related to the weekly topics being taught and each question was open for one week on each platform. Participants self-selected which platform(s) to use to provide responses to the questions. Interim results show that all participants thus far are more motivated to use Facebook over Moodle, even though Moodle is the common platform used by the institution where the study was conducted.

## Working Together – Mahi tahi

*Beverly Taylor*
*Waikato Institute of Technology*

Marketing Planning and Control is a compulsory level 6 module in the Marketing Major for the Bachelor of Applied Management Programme, at the Waikato Institute of Technology (Wintec). Enrolments in the module comprise mainly international students in their first semester of tertiary study at Wintec and in New Zealand. The composition of the class presents a range of learning, cultural and social challenges for staff and students.

The poster identifies these challenges and provides an overview of the embedded partnership model, adopted to support staff and students. This model involves a Student Learning Services (SLS) staff member and business tutor working together on course and assessment development, team teaching, assessment workshops and study support for students.

The embedded partnership model is being evaluated and the findings and recommendations will be included in the poster. The preliminary findings indicate the desirability of adopting a similar model in other business modules.

## Preparing Nurses for the Future: Dedicated Education Unit (DEU) collaborative clinical learning spaces

*Jenny Wraight and Chris Dunn*
*Nelson Marlborough Institute of Technology*

The Nursing Council of New Zealand (NCNZ) request that nursing schools increase the number of nursing students to meet the projection that an extra 966 nurses will be needed by 2035 to cover the demand of nurses retiring and the aging population (NCNZ, 2013). Dedicated Education Units (DEU) are recommended as the way of the future to enhance nursing students' clinical learning and experience. The philosophy that underpins the DEU is that it has the ability to not only provide an increased number of students in a clinical setting but also enhance student learning through collaborative support of both academic and clinical providers.

The DEU pilot project commenced in 2016 to enhance and support student learning in clinical placement. The pilot DEU were evaluated at the end of 2016 to test the DEU philosophy's hypothesis. Focus groups were conducted with nursing students, clinical liaison nurses and academic liaison nurses giving feedback.

Themes were extracted from the collaborative clinical and academic focus group discussions. Enhanced relationships between students and clinical nurses, acceptance, organisation and planning were identified as facilitating both nurses' and students' clinical experience. Student nurses commented on the positive relationships and partnership of clinical and academic nurses within the DEU collaborative environment.

It is recommended that DEU be introduced into more clinical areas to provide a successful collaborative clinical learning space, linking academic learning and clinical teaching. Enhanced communication and clear roles and responsibilities were identified as areas for improvement when developing new DEU.