Otago Polytechnic | Southern Institute of Technology | Ara Institute of Canterbury

OPSITARA 2021 Research Symposium Proceedings

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Introduction from the OPSITARA 2021 Research Symposium Convenor

Tēnā koutou, and welcome to the OPSITARA 2021 Research Symposium Proceedings.

Broadly speaking, a key purpose of OPSITARA research symposia is to foster and nurture emergent research and researchers across Otago Polytechnic, Southern Institute of Technology, and Ara Institute of Canterbury. Hence the 'OPSITARA' moniker. These three organisations represent the 'southern hub' of the Te Pūkenga – New Zealand Institute of Skills and Technology subsidiary network. The OPSITARA 2021 Research Symposium is a 'first' for two important reasons: it is the first time that Ara Institute of Canterbury has hosted this symposium; and, it is the first time an OPSITARA research symposium has been held exclusively online. This was due to the impact of COVID-19 related travel and assembly restrictions.

This 2021 symposium was held on 14–15 October 2021, with the keynote address being delivered by Professor Federico Freschi from Otago Polytechnic (*'Creative Research: What is it and why do we need it?'*). The research symposium comprised six sessions over these two days. Within these six sessions were 20 streams, in which a total of 69 papers were presented. Of these presentations, a total of 44 were 15-minute 'full presentations', while the remaining 25 were 5-minute 'research bite' presentations. All papers submitted to the OPSITARA 2021 Research Symposium have been subject to peer review.

An outcome of this OPSITARA 2021 Research Symposium tripartite collaboration will be to grow research engagement, impact, opportunities, and synergies across and beyond this organisational network. In so doing, we also signal the research capability and potential of the Te Pūkenga network more broadly to conduct research with a focus on applied and technological research. It is my firm belief that this strong 'southern hub' contribution will continue to grow and strengthen the quality, relevance, and impact of research within the Te Pūkenga network over the coming formative years. I look forward to what the 2022 OPSITARA Research Symposium will reveal next year!

Ngā mihi nui

Dr Michael Shone

Convenor – OPSITARA 2021 Research Symposium

Ara Instutute of Canterbury Ltd., New Zealand

October 2021

Keynote Address by Professor Federico Freschi

Head of College Te Maru Pūmanawa

Creative Practice & Enterprise

Otago Polytechnic, New Zealand

Creativity in Research: What is it and why do we need it?

Tēnā koutou i tēnei ata.

He mihi nui tenei kia koutou mai i Te Kura Matatini ki Otago me Te Maru Pūmanawa. Ko Federico Freschi ahau. Te tumuaki o Te Maru Pūmanawa.

Tēnā koutou katoa.

Good morning colleagues, thank you to Bruce Russell, Michael Shone and the team at Ara for the invitation to present in this keynote forum; it is my pleasure and privilege to be here.

If I were giving this talk in the United States, I'd probably begin with a joke; if I were giving it in China I'd begin with a wise aphorism; but given that this is New Zealand I'll begin with an understatement:

We're living in difficult times.

While we've been to some extent protected from the worst ravages of the Covid-19 pandemic in Aotearoa, we are not immune to its consequences: the sharply increasing divide between rich and poor; the resurgence of populist nationalism; the relentlessness of neoliberal multinational capitalism and its deleterious effect on an already fragile and compromised natural environment; the social, political and economic cost of closed borders and disrupted supply chains – these are all wicked problems that have been caused or exacerbated by Covid-19, and their effects are increasingly making themselves felt here.

As a sector we are also dealing with disruptive changes that have prompted something of an existential crisis as we try to imagine a future in the context of a new organisation. One that at best seems to offer strength in unity, and at worst a complete loss of autonomy. In many ways it seems that we are besieged: by a global pandemic; by the doomsday scenarios of climate change; by a

mental health crisis that affects increasing numbers of our tauira and colleagues; by closed borders that protect us even as they drive a wedge between us and our international communities; by the imposition of a new educational model that leaves many of us feeling insecure about the status of our disciplines, the programmes we offer, and the intellectual foundations on which they have been built.

In short, without wanting to sound like a prophet of doom, it seems like the world in general is in an awful mess, and that as a sector we're on shaky ground. As educators we have a particular responsibility to acknowledge this situation and actively to find strategies to remedy it as best we can. Our first obligation, after all, is to ensure that we're enabling our tauira to deal with the present whilst simultaneously preparing them for the radically different future they will face. In this context 'Ākonga at the centre' is not just a jingoistic catchphrase but rather the implicit mission that brings us all here today.

Indeed, it is clear from the titles of the papers being presented at this conference that within our sector the notion 'education' is not some abstract Platonic ideal, but rather something that is real and tangible; it inspires us to get up in the morning and to keep asking questions about how we can creatively push the boundaries of our disciplines in order to meet that mission.

It would be reckless to think that the solutions to the existential crisis in which we find ourselves will derive from the values and thinking of the culture and the systems that created it – in short, we can't keep doing things the same way and expect a different result. And herein lies the opportunity. We should not, in the words of Churchill's famous aphorism, let a good crisis go to waste. Dramatic changes like those we're experiencing offer opportunities for uncovering fresh insights and pathways for growth, but we have to make the choice to seize them or be seized by them.

Certainly, one of the most positive aspects of the last twelve months has been the extent to which colleagues across the ITP sector have been engaging with each other. This has happened formally on Te Pūkenga working groups. Less formally it has been happening organically through communities of practice and other interest-driven collaborative forums that have developed in response to the need to come to terms with a dramatically different operating model and what this may mean for the future of our institutions.

As is happening with other disciplines, the creative sector came together at a wide-ranging hui at Unitec in April this year. One of the positive outcomes of that hui has been a series of ongoing kōrero amongst colleagues across institutions, sharing insights, ideas and programme documents in a way that would have been unthinkable just a couple of years ago. In short, it seems that across the

sector the twin monsters of Covid and Consolidation are forcing us to be more collaborative and creative, and that, I believe, can only be a good thing given the parlous state of things.

As the Head of a College that is committed to fostering and promoting excellence in the creative industries in Aotearoa New Zealand, I never miss a public opportunity to advance my personal ethos that the creative arts, design and architecture are the most powerful transformative and democratic agents that we have. In their ability constantly to provoke thought and in harnessing the power of the imagination, the creative arts remind us that their value is as manifold, complex and contradictory as the values of those who engage with them; they challenge us to see the world – and our place in it – differently, and in so doing affirm a common humanity founded on respect for differing points of view.

Similarly, the design disciplines (including architecture) literally form our world, the creative intentions and processes underlying them constantly reminding us that we have the ability and shared responsibility to design the world we hope to have and to leave behind. This is particularly true in the current global context, where attitude and ingenuity are increasingly going to have to substitute for resources that we once took for granted but can no longer afford to plunder. It is through fostering and furthering these creative intentions that we can hope to find effective and sustainable solutions to the challenges of restoring some balance to our overheated, exhausted planet.

At risk of abusing the privilege of having a captive audience, this brings me to the central theme of this address: The relationship between creativity and research, and why, I believe, these offer a beacon to lead us out of the doom and gloom that we're currently experiencing.

So, what is creativity, and why do we need it?

Creativity, I would argue, is about survival. What evolutionary biologists call 'adaptability' – that is, essentially what drives the survival of a species – is fundamentally about creating ways of ensuring viability. Evolutionary biology teaches us that it is ultimately the superior brainpower, coupled with excellent vision and the dexterity granted by having opposable thumbs, that has enabled the survival of a naked primate that is otherwise physically ill-equipped to withstand the rigours of nature. But most of all, it's about being highly adaptable – this, ultimately, is what has put us, and kept us – on top of the food chain. Self-evidently, it is also this adaptability that is going to have to see us through the crisis engendered by that our position at the top of the food chain.

If we see creativity as the engine of adaptability, it follows that the old cliché is true: everyone is creative. It's deeply encoded in our DNA. None of us would be in this forum today if at some atavistic level we weren't profoundly creative.

Human beings almost from the outset have channeled their creativity into two dominant streams: one the one hand, using their dexterity and superior intellect to ensure their physical survival. On the other hand, channeling this into the creation of higher order, imaginary realms in the service of what one could call spiritual survival.

Without seeking to promote the problematic construct of human exceptionalism, I think it's fair to say that from the outset we have had a sense that we're a species apart, that we have a higher mission. Over time, people who have developed the skills related to the physical manifestation of this spiritual realm – artists, musicians, actors, poets, and the like – have been valorized for their creativity. This has led to a surprisingly persistent myth that only special, talented people are innately creative.

 In turn, this means that most people who are not artistically inclined have a diminished sense of confidence in their creative ability. At the other end of the scale, it leads to the monstrously inflated egos of artists whose belief in their own publicity leads to an antisocial sense of entitlement – the exposure by the #metoo movement of the endemic sexual harassment in many creative industries is a case in point.

However, if we think of creativity simply as the act of turning new ideas into reality, then it's clear that it is one of the defining attributes of humanity and not just the preserve of uniquely endowed individuals – think of the ways in which all of us responded to the contingencies of teaching and working in lockdown.

Ultimately, creativity is characterised by the ability to perceive the world in new ways, to reveal new truths that are hidden in plain sight, to make connections between seemingly unrelated phenomena, and to generate solutions. Now, replace the word 'creativity' with 'research' and you'll see where I'm going with this: at its core research is about exploring, exposing and challenging perceptions about the world, about making connections, about finding solutions and ultimately about creating a better world.

So, given that we're living in a world where everything – environment, society, economies, technologies, professions – are changing kaleidoscopically, it's clear that as researchers and educators we have a very specific role to play. "Education," as Nelson Mandela famously reminded

us, "is the most powerful weapon which you can use to change the world." It is also one of the most creative of terrains, given that it is both practical and deeply symbolic of who we are as human beings. It is common to all cultures and all societies; it shapes our views of the world and therefore informs everything in our environment. And, importantly, as a developmental force it perpetuates itself by building on its own knowledge.

The Humboldtian notion of *Bildung* is instructive here in capturing the notion of education as a lifelong process of development and identity formation rather than the instrumentalized acquisition of training and skills. This is not a swipe at Te Pūkenga's much-hyped emphasis on skills training. Rather, it is a challenge to us as the intellectual leaders of the institutions that deliver this kind of education to insist that skills acquisition that is not created around thoughtful networks of research is doomed at best to be short lived and at worst irrelevant.

It is also a clarion call to us to uphold and defend the forms of knowledge that we generate in areas that fall outside narrow definitions of 'skills' and vocational training. Again, we cannot in good faith claim to be putting our ākonga at the centre if we are purveying second-hand knowledge: we must insist on the right to generate and lead that knowledge in order to live up to the ideal of a truly transformative educational experience that meets the needs of all learners, particularly those from underserved communities, and regardless of level or path of study they are pursuing.

At the same time, without losing sight of the 'real-world', vocational focus of our curricula we must uphold the value of speculative research in our domains, and the aspirational power that this represents. I would argue that everyone benefits from being trained to think critically, to understand the broader context surrounding their mahi, and being encouraged to aspire to think about more than is immediately apparent. Critical, aspirational thought should not be an educational luxury confined to elite universities that claim the status of 'research intensive'; rather, it should be available to all in our society who seek it out.

I think it's worth thinking about shifting away from an instrumentalized notion of 'vocational' as relating to industry- or occupation-specific skills to understanding and promoting it as a broader, more deeply held sense of purpose expressed through one's life and mahi. In this sense, all work is important; vocational work can be more than just a job.

If Te Pūkenga's implicit vision of sustainable connectivity and networking across the ITPs and industry is to succeed it cannot be driven by political pressure or the need to fulfil short-to medium-term skills shortages. Rather, there is real potential for the development of creative human capital not as a commodity, but as a key driver of a sustainable, vibrant and flourishing communities, which

will in turn have beneficial effects on the economy. It seems to me that from our point of view, this will only be possible if we are actively partnering with industry in generating future-fit knowledge, not merely supplying skilled workers of a type that Foucault would describe as self-disciplining subjects that unquestioningly meet the needs of those in power.

Furthermore, and at risk of being polemical, I think we would also be remiss in not problematizing the notion of skills insofar as they perpetuate exploitative economic forms and practices. Indeed, one could argue, cynically, that the developed world suffers a surplus of the kinds of products – whether agricultural, commercial, creative, or otherwise – produced by skilled labour, but seems not to gain proportional value from it.

The corollary of this is that the product of most skilled labour seems to be motivated by profit, not need. Such profit is essential to any economy, but it also presents a major liability that a responsible educational research philosophy cannot ignore. Where skills are needed, it behoves us to ensure that these are reinforced by principles of mindfulness and respect for self, others and the environment. This conference demonstrates that research-driven educational concepts legitimize their own implementation; without them, one is simply perpetuating the status quo with all its hard-baked biases, prejudices, greed and exploitation.

In this context, a conference like this one makes a considerable contribution to focusing our attention on the complex processes that underlie education for a real-world context. The one thing that unites the disparate themes and disciplines represented in this conference – apart from coming from Te Wai Pounamu – is that they are commonly linked by intelligence, curiosity and a passionate belief in educational improvement through innovation. It seems that despite all the challenges being thrown at us we won't be told anything is impossible, we are the agents of change, and we are making it happen.

As Heraclitus famously posited, nothing is permanent except change. Research is fundamentally about change; it is about questioning, openness, a pushing of boundaries, and never accepting things at face value. These are core values that we must hold before us as articles of faith. While we encourage creativity and playfulness in the educational context, we are always mindful of the real-world contexts in which our graduates will operate as professionals and the values of integrity, discipline and respect that are required for success. A forum like this represents an opportunity to test the space between ideas and action; between thinking and making; between theory and empiricism.

The principle of the so-called 'four Cs' of design thinking – namely, Creativity, Collaboration, Communication, and Critical Thinking – has become somewhat commonplace outside of design studios in recent years. I think it's worth reclaiming these four Cs from the easy oversimplifications of corporate jargon and to see them as a powerful driver of research. While creative ideas and original research questions have their origin in the minds of individuals, it is only through collaboration, effective communication and responsible, critical thinking that they can come to fruition.

To my mind, the collaborative aspect is perhaps the most significant in our current context. It has been heartening to see the generosity with which colleagues across the sector have over the past year given of their professional time and expertise, and have been willing to suspend their professional rivalries, in pursuit of a greater idea. Namely, how as a sector we can ensure that we continue supporting tauira, raising the bar for industry, respecting the mana of those who work in the sector, and ultimately advancing Aotearoa New Zealand's reputation as a forward-thinking, fair-minded democracy. I believe that we can only be stronger if we continue to collaborate in driving a research-driven approach to curriculum and teaching and learning that is rooted in a commitment to real-world scenarios but equally open to aspirational, speculative thinking.

At the same time, we can draw strength and inspiration from Te Pūkenga's commitment to upholding the values of Te Tiriti. The principles Manaakitanga and Kaitiakitanga guide us to see the complex interrelationships between ourselves and the world around us and remind us to be generous with each other and respectful of the environment. As the world around us becomes increasingly complex and as the tensions between technological advancement and environmental degradation increase, it is clear that solutions for a sustainable future are only going to be found through multidisciplinary collaboration that is open to paradigms and knowledge systems that are other than those that have sustained the status quo.

In conclusion, I'm reminded of design researcher and theoretician Ranulph Glanville's dictum that "Design is an act based on generosity, through which we change the world." One could well say the same of research: the act of wrestling with difficult questions and pushing the boundaries of knowledge is a hopeful and generous one; it enables us to envision sustainable futures.

My thanks to all of you for giving so generously of your time and expertise in this forum, and to our colleagues at Ara for hosting this event. In the tradition of Steven Covey I leave you with what I've catchily entitled my *Seven Habits of Highly Effective Researchers who Continue to Balance the*

Demands of Teaching, Assessment, Administration, Pastoral Care and the General Unpredictability of the Future.

1. Take your time: Edison's notion of genius being one percent inspiration, ninety nine percent perspiration rings true for all mahi, but is particularly relevant when it comes to research: any research pursuit starts with some degree of innate ability, but this will never amount to much without sufficient opportunity, encouragement, training, motivation, and, most of all, practice.

2. Be humble: There is always someone smarter, more ambitious, more experienced, better looking, more innately gifted waiting in the wings. Listen to those who have trodden the path before you; keep an open mind; and never forget that you're only as good as your last research output.

3. Trust your instincts: Give yourself permission to explore ideas that you believe are worthwhile, especially when it seems like there is nothing more to be said on a subject.

4. Focus on the detail: When it comes to quality, detail is everything.

5. Don't lose sight of the big picture: While being mindful of detail, don't get lost in the weeds. Remember that the sum of your research output will always be greater than its parts.

6. Acknowledge those who make things possible: The single-mindedness required to produce any research output would be impossible to maintain without the support and inspiration of colleagues, administrators, friends and whānau. Honour this manaakitanga by being the best researcher you can.

7. Don't keep doing the same thing and expect a different result.

Tēnā koutou, tēnā koutou, tēnā koutou katoa.

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Symposium Session Streams: *Creative Arts*

The following section contains published abstracts from the OPSITARA 2021 Research Symposium sessions relating to the Creative Arts. This includes the broad themes of:

- Media
- Art
- Creative Practices

Technological Innovations in the Community Media Space

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Abstract

In 2019 Aotearoa's 12 access radio stations agreed to redefine themselves as 'access media' with their national body renamed the Community Access Media Association (CAMA). This was acknowledgement that although broadcast radio remains central to their work, they are increasingly engaging with other platforms and technologies to reach their audiences and achieve their important goals of representation and social unity. Their funding body, New Zealand On Air, was instrumental in pushing access media toward online streaming of their broadcasts, social media use and podcasting in 2016 as part of their own 'discoverability' strategy. This presentation will consider three stations who have pursued unique projects that extend their primary broadcast: Otago Access Radio produced YouthZone, an app for younger users of access media content; Arrow FM turned to local WaiTV to televise their shows; and Free FM was an early adopter of Amazon Alexa capability in Aotearoa (Pauling and Beatty, 2021).

This study demonstrates that because the 12 access media stations are affiliated rather than a network, they each have the freedom to pursue their own strengths. These differing approaches are driven by the station manager's personal interests and contacts, local or accessible technology and their particular audiences' needs.

Alternative media (e.g. access media) and the innovations made in response to changing audience practices and increasing digital capability as discussed here inform teaching on the Bachelor of Broadcasting Degree as exemplars of sustainability. This material draws on research supported by NZOA and has Ethics approval from Ara Institute of Canterbury.

Keywords: *access media, technology, innovation, sustainability, audiences*

Professional Issues in Podcast Creation

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Abstract

Podcasting is a form of digital audio content that can be subscribed to and easily accessed from a personal computer. Further, it can be downloaded to a mobile device, such as a smart phone where the user is able to listen to or watch it anywhere, anytime. By 2015 podcasting was described as 'mainstream' (Berry, 2015, p.299). The scope of content is as varied as the audiences themselves, proliferating into a vast array of podcasts distributed internationally through an increasing range of providers through several different technological devices. Commercial radio has historically followed trends where audiences gravitate. This practice keeps their brands in front of potential listeners with the purpose of ultimately turning consumers of content into profit. Podcasting's capacity to time shift content is disruptive of linear broadcast radio, yet Markman and Sawyer regard the platform/medium as "both a boon and a challenge to traditional broadcasting" (2014, p. 20). In addition to a description of what podcasting is, how podcasts are created, and how they are used, this initial pre-research discussion addresses some critical issues that are emerging concerning podcasts. These issues are intellectual property and copyright, monetisation, and podcast standards. As podcasting matures and new uses are discovered, we will see podcasting growth incorporated into the commercial radio embrace. This more nuanced understanding of podcasting will assist students as they seek employment and leadership in this growing field.

Keywords: *podcasting, radio, commercialisation, technology*

Using Collaborative Projects to Improve Industry Capability.

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Abstract

How can we use collaborative projects to improve student capability and develop industry-valued personal attributes?

The New Zealand Broadcasting School (NZBS) offers an immersive degree programme that encourages learners to become resilient, creative, adaptable, and highly valued team members. These attributes are critical if students are to succeed in a fast-changing media landscape. Industry requires interns who have specialist knowledge, general media skills and are highly functional team members. To foster these attributes the degree programme uses collaborative projects bringing together students from different streams.

One of these involves blended syndicates of journalism, radio, and screen students that are paired with a client to complete a real-world commercial project. The project is in its seventh year and 65 clients have participated. This experience expands student learning as they must meet the needs of their client and build team relationships. Students use their collective knowledge to develop a solution for their client's objective while navigating 'real-world' elements out of their control.

The other major collaborative project is MetroNews. It brings together journalism and screen students to deliver a daily half hour news show. This industry simulated news production is largely student-driven. This project is an excellent example of the immersion learning style at the heart of the degree that accelerates the development of student independence, collaboration, and capability.

Both projects demonstrate the importance for learners of facilitating these collaborative educational experiences with real-world contexts, challenges, and consequences.

Keywords: *WIL, pedagogy, collaboration, media*

Urban Contemporary Art: From Street to Gallery

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Abstract

How can the values and conventions of urban art practice be translated from the street into a contemporary art gallery setting?

Successful street art practice by its very nature defies 'monetisation' - it is designed to be un-commodifiable. Regardless, practitioners who devote significant time to their practice need to find ways to respect its ethos, while earning a living. My ongoing research, accessing the market through my own gallery space as well as others (e.g., Art Bureau Gallery) explores strategies to retain that ethos while making saleable artifacts. In this I am not alone, and relevant models for this include Elliot O'Donnell (Askew one) and Franck Notto (Zest).

My body of work explores conventional materials and techniques commonly used in urban art practices such and graffiti, stencilling, and mural production applied to a series of paintings using abstract interpretations of mark making on glass canvasses. Linework is projected onto the surface of the glass, and masked-out to define a stencil, in a form of mono-printing. The stencil is sprayed using aerosol paint, contrasting with the high gloss texture of the glass, and the reverse is distressed with directional textures and colours.

Key learning has focused on refining this glass-painting technique through process repetition and production-line processes. From this has come deeper understanding of the use of abstract visual language. I hope to share this with students, as many of them are engaged in urban art practice and may need to move between these separate but related fields of practice.

Keywords: *street art, contemporary art, exhibition, practice-based research.*

19 Influences of Emotional Responses to Contemporary Art

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Abstract

In 2020 the Dunedin School of Art held the exhibition The Complete Entanglement of Everything, comprising artworks in which the artists were responding to environmental issues. This presentation reports findings from research that aimed to evaluate exhibition visitors' emotional responses to the exhibited artworks.

With ethics approval from the Capable NZ research ethics subcommittee, 25 exhibition viewers were recruited for this empirical study. Participants sorted photographs of the artworks according to the strength of their emotional response along a positive/negative continuum, then answered questions in a semi-structured interview about their strongest positive and negative emotional responses to the artworks. In describing their emotional responses to the artworks, participants also articulated why they had these emotional responses.

Inductive thematic analysis of transcriptions of these explanations revealed the factors that influenced participants in forming their emotions. The 19 factors identified fall into the three well-established categories, relating to the individual viewer, relating to the artwork being viewed, or being independent of both viewer and artwork (Belfiore & Bennett, 2007). Most of these factors confirmed previous research into the influences of responses to art, but two of the factors are new. This research informs our understanding of how people respond to art and hence contributes to artistic and curatorial practice to increase audience emotional engagement. The research also informs our approach to evaluating the impact of art research.

Hidden in Plain sight: Towards a History of Printmaking at the Ara School of Art Design

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Abstract

A tour of New Zealand's galleries and libraries will lead interested visitors to the conclusion that painters and their supporters dominate the local art scene. Other genres, and especially the graphic arts, are suffering from comparative neglect. The many well-illustrated surveys and monographs which concern themselves with the achievements of New Zealand's painters have only recently been complimented by a more detailed account of the history of sculpture in this country. Similarly, tertiary art education in New Zealand, and especially in the university sector, has long prioritised the teaching of the most prestigious artistic genres, such as painting and sculpture. By contrast, in its 40 years of existence, the School of Art and Design at Ara (formerly Christchurch Polytechnic), has employed many of New Zealand's most respected printmakers, among them Barry Cleavin, Denise Copland, Michael Reed, Sandra Thomson and Jason Greig. This research project aims to document and thus highlight the specific contribution the school has made to the history of printmaking in New Zealand. It will further aim to place this within the broader context of socio-political and economic developments that set the direction for art education in the polytechnic sector.

Keywords: *printmaking, tertiary art education, New Zealand*

Human-centred Design as a Strategy to Research How Millennials See Christchurch

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Abstract

'Vibrancy' has become a critical measure of a successful city. But the 'brand' perception of a city can often be out of touch with the realities of living within a city. There's a disconnect between the way civic place makers curate experiences to engage young people and what young people value and identify with.

We asked thirty Visual Communication students to highlight a social, environmental, or economic factor that impacted on their perception of Christchurch's 'urban vibrancy'. They were then asked to develop a proposed response with the potential to positively shift perception and/or highlight a preferred future for the city, and had to be prepared for presentation to employees of Christchurch City Council.

A number of key themes emerged. These included the curation of youth-oriented social meeting spots and events, improving cultural literacy and inclusion, and better defining the cultural and creative assets within Christchurch. Presenters were subsequently invited back to offer feedback on Council-run initiatives targeted at millennials.

Even though the fabric of the city has changed dramatically over the past decade, the perception by young people hasn't dramatically shifted. They still consider Christchurch less vibrant or creative than Wellington, less tolerant of diversity and now, with the new CBD, more out of reach for them socially.

The outcome has opened a dialogue between local government and some young people within Christchurch to explore initiatives and increase the perceived vibrancy of the city

Keywords: *Human-centre design, city making*

How Do Creative Communities Develop in a Moneyless Economy? A Case Study of New Zealand Music Video Production in the 1980s

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Abstract

In 1992, New Zealand On Air began providing funding for the production of music videos. This decision recognised that music videos were a crucial means of promoting popular music, that the recent deregulation of the broadcasting environment left local music vulnerable to being overwhelmed by foreign imports, and that no formal infrastructure existed for music videos to be made. Yet hundreds of music videos had been produced and broadcast for more than a decade prior to this decision.

This paper explores how, in the absence of formal support and funding, music videos were produced in New Zealand prior to the establishment of New Zealand On Air. It will examine the 'moneyless economy' that prevailed in music video production throughout most of the 1980s and, based on interviews with many key players of the era, detail the informal arrangements that evolved between video directors and universities, video production facilities, TVNZ employees, and especially the television show Radio With Pictures. It will also evaluate the effects of the introduction of formal funding on the production of music video in the early years of NZ On Air, especially the imposition of neoliberal frameworks on the appraisal and funding of creative projects.

By doing so, the paper will consider how creative networks are formed in collaborative ventures like music video production in the absence of formal infrastructure, and, more broadly, how the emergence of neoliberalism in New Zealand affected – and continues to shape – broadcasting and the wider environment for creativity.

Keywords: *music video, neoliberalism, creative economies*

Ngā Atua Hou (the People Weaver)

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Abstract

How might digital animation and projection techniques be used to augment a large mural as part of a community Matariki celebration?

Part of an Onehunga 'street activation project' run by Ole Maiava with community groups. The aim was for "Nga Atua Hou (the People Weaver)… to return the mauri of our spaces through the reconnection of whakapapa, visual storytelling and the awakening of 'Nga Atua Hou' embodied in today's generation." It was a collaboration between me (animation), Bobby MacDonald (mural), and Shane Mclean (sound).

It was a created as a Matariki 2019 celebration, and featured a mural depicting local community worker Amiria Puia-Taylor as Hine-te-iwaiwa – a goddess of weaving. The mural was activated by projecting 'mapped' animation over the mural (in combination with music and sound design), telling the story of the local harbour and people. Community engagement was promoted through the inclusion of children from a local primary school. One of the most interesting results from the project was the positive reaction from the local community. The showing of the projection was a very social event, with many whanau, 'camping out' to watch. Pakeha, Maori and others were obviously delighted to see themselves, their community, and local environment represented in the story of 'The People Weaver'.

Following the success of this production, Bobby MacDonald and the Nga Atua Hou team are planning a series of these murals with projection at various locations around the country, telling the stories of the iwi and hapu.

Keywords: *animation, community project, bi-cultural partnership, collaboration, street art*

Frankenstein: a Case Study with Physical Theatre

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Abstract

How can innovative theatrical techniques align with 'realism' in theatre to substitute for high-budget technical 'production values'?

The recent Court Theatre production of Frankenstein provided an opportunity to work with performers more accustomed realistic modes of theatre, and to workshop alternative production and devising processes using physical theatre techniques.

The company worked together to create collaboratively. The fundamental proposition was that 'the show comes from the whole company'. Scenes were workshopped in long improvised sequences using the full group, but building individually, exploring a given series of elements, emotions or characters. Each individual short-listed their own favourite discoveries and presented them back.

The group then discussed what they found most effective, and smaller groups developed sequences based on the previous step's reflection. This process can be used to reduce any residual apprehension in the performers, who must commit to 'the moment' without any reservation.

Some of the project findings include the use of staging to create physical distance between realistic and abstract performances. This enables the audience to believe both at the same time. Physical theatre sequences accompanied by sound design can also create effective moments of reflection for the audience.

This is the first time we have tried this combination of devised physical theatre and traditional scripted work. The general finding is that there is a place where it works. The finer details of when and how still require further analysis and investigation through other projects, potentially in association with the Court Theatre or in a teaching environment.

Keywords: *theatre, direction, acting, physical theatre*

Symposium Session Streams: *Engineering and Construction*

The following section contains published abstracts from the OPSITARA 2021 Research Symposium sessions relating to Engineering and Construction. This includes the broad themes of:

- Engineering Design
- Urban Design
- Housing Construction
- Construction Management

Developing an Operational Workflow to Integrate Mobile LIDAR Scanner in BIM Optimisation

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Abstract

LIDAR-based 3D scanner has shown its effective utilization in BIM-based workflow. Professionals mostly use this tool to collect as-built data to the BIM world, on which they prepare drawings or 3D models for relevant design intervention. However, due to its complex operational nature in data collection and data integration with other 3D software, it is becoming unfriendly to any first-time user to use it in their investigation. Thus, we set for this research to develop a workflow with a mobile LIDAR scanner and BIM tools. This study develops an integrated workflow framework for mobile 3D scanning and BIM tools on a standalone case-building, i.e., SIT energy centre/portable house. The study destines to compare the laser-scanned as-built model with the Revit generated model. The research methodology comprises data collection by a mobile LIDAR scanner, data conversion to the BIM tool, conventional way of making 3D of the case building, and finally checking the dimensional discrepancy between two models. The finding shows LIDAR scanning gives more accurate data compared to the conventional way of 3D modelling. The developed model can be used for various purposes such as modification in existing buildings, lightening, energy efficiency analysis and interactive virtual reality representation. Besides, SIT research faculty aims to develop research projects for students to develop models for heritage buildings that could help the conservation process.

Keywords: *virtual documentation, quality assessment, 3D generation, BIM, communication*

Articulated Pneumatic Base for Injection Moulding Parts

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Abstract

In the current highly competitive market of injected plastic parts, it is essential that companies invest in developments aiming at more expressive results in the higher quality and reduced costs of the final product. Therefore, automated options, such as articulated bases, stand out by increasing the process productivity and quality assurance of the final product. Hence, this proposed product has the objective of meeting the current manufacturing necessities while improving the process efficiency, cost and health and safety measurements. This was achieved through a multidisciplinary design approach, in which each component is developed considering its impact and interaction with the surrounding ones, the use of 3D modelling tools and finite element analysis (FEA). In addition, project management such as health and safety, environmental plan, quality plan, culture and ethics, legal regulations, and financial plan are also discussed in this paper.

Keywords: *injected plastic parts; automated; multidisciplinary approach*

3D Printing a Fully Functioning Replacement Carburettor

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Abstract

Research Aim/Questions

3D print a fully functioning replacement carburettor on an IC engine that performs as well or better in terms of power output and/or fuel efficiency.

Research Design/Methodology

An existing TVR motorcycle Spaco carburetor was modelled in CAD and then printed on an HP Multi Jet Fusion (MJF) 3D printer using PA 12 plastic (nylon polymer). A 'Dynonertia' dynamometer was used to measure power and torque of a 200cc Lifan engine using the original Lifan carburetor, Spaco carburetor, and 3D printed carburetors to compare the power and torque results. An Air Fuel Ratio (AFR) gauge and fuel flow system were fitted and the carburetors were tested at a set RPM of 4400 (approx. 70kph cruising speed).

Results

Multiple 3D printed carburettors were produced, with small variations. The results of the 3 carburetors tested showed that the power output of the 3D printed carburetors was slightly lower than that of the Sparco and Lifan carburetors (5.5 kW compared to 6-7 kW) and the air fuel ratio was slightly lower (12 vs 13-14) for printed carburetors.

Implications for teaching/industry

This ongoing project has links with; Rodin cars (HP Printers), and KCT University in India (test motorcycle). Difficulties with this project highlight the challenges of working in the Automotive, high noise/vibration space, tolerancing and design.

Keywords: *Wind tunnel, sports engineering, kayaking, drag and lift*

A Novel AVR Microcontroller-based AOA Interface

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Abstract

Android Open Accessory (AOA) has been proven to be a useful interface between an embedded system and an Android device. A novel AOA interface based on an AVR microcontroller was developed. Based on this interface, various BEngTech students have successfully developed their final year projects at Ara Institute of Canterbury. The AVR is an 8-bit microcontroller. Most of the sub-families of AVR do not have built-in USB physical layer (PHY) hardware. An external USB driver such as MAX3421e is required.

In this paper, the design and implementation of AOA in an ARM Cortex-M33 based microcontroller is presented. ARM is the most widely used 32-bit microcontroller for the embedded systems. With all other commonly used serial interfaces, the microcontroller also has built in the USB 2.0 full-speed/high-speed controller and on-chip PHY. The Android accessory is designed as one of the tasks in a cooperative multitasking system. The accessory task maintains a state machine that is responsible for establishing the connection with the Android device and providing the read/write interfaces to other user tasks in the system. The accessory is implemented in the LPCXPRESSO55S16 evaluation board supported by NXP's MCUXpresso suite of software and tools.

Throughput of the accessory is crucial in high-speed sampling applications, which will be investigated and presented in the paper. The ARM-based Android accessory will be implemented in an Android Digital Analyser and in a novel digital signal processing application.

Keywords: *Embedded systems, ARM Cortex-M33 based microcontrollers, Android Open Accessory*

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Solar Powered Vertical Farms: A Case Study for New Zealand

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Abstract

In major New Zealand cities, food crops (fruits and vegetables) often travel great distances from farm fields to the dinner table. Considering the growing urban population, these "food miles" raise sustainability-related issues, such as fossil fuel consumption and its effects on the environment. Growing food crops inside (or near) urban centres seems an optimal solution. However, agricultural land in such areas is scarce and very expensive. Vertical farming is an innovative agricultural practice that can be employed in such scenarios. In this approach, food crops are grown inside a multi-story building, called a vertical farm (VF), However, according to the existing literature, the enormous electric energy demand of VFs is becoming a key challenge from both the economic and sustainability points of view. Therefore, in this study, an analytical method to determine the maximum number of floors of a VF that can be powered solely by building-integrated solar photovoltaic panels (PV) is proposed. It considers the location of the site, monthly average daily solar irradiation, parameters associated with the luminaries, geometrical dimensions and orientation of the layout, tilt angle and the row spacing between the rooftop panels, and the efficiency of the conversion system. As a case study, the hypothetical 300m2 vertical farms, located in Auckland and Dubai, were found to have a maximum of 2 and 4 floors, respectively. A free online tool has also been developed to help designers, researchers, and students to analyze VFs located anywhere in the world.

Keywords: *BIPV, urban agriculture, skyfarming, artificial lighting*

Solar Powered Cryptocurrency Mining Business in New Zealand

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Abstract

Cryptocurrency mining refers to a process in which people earn monetary rewards against their invested computational resources for solving complex mathematical puzzles. These returns are directly proportional to the computing speed of the mining hardware, and thus its electric power requirements. Increasing commercial interest in cryptocurrency mining is promoting energy wastage and greenhouse gas emissions on a huge scale, which is becoming an alarming global sustainability issue. An alternative approach would be to power the mining hardware using renewable energy resources. This paper investigates the profitability of investment in solar photovoltaic (PV)-powered cryptocurrency mining. Considering the current trends, Ethereum (ETH) was chosen as the mining currency. "Bitmain Antminer E9", which is the state-of-the-art Application-Specific Integrated Circuit (ASIC) hardware, was selected as the mining machine. Simulations, performed for various cities of New Zealand, showed a daily revenue and payback period of $288 ($2,019 weekly) and less than one year on average, respectively. This was obtained with an initial investment of $100,000, assuming that the ETH market price doesn't fall below $3,320. To power up the system, a 23kW PV array would be required, along with a battery bank capacity of 7,625 Ah. The underlying technical and financial assumptions are also discussed. Apart from the commercial value of this research, the study serves as an interesting technology-oriented business case for engineering and business students.

Keywords: *Blockchain, Ethereum, BIPV, Renewable Energy, Payback*

The Effects of Globalisation on Quality and Sustainability in the Cashmere Industry

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Abstract

Considering the emerging global markets for the consumption of luxury fashion products, issues prevailing in the luxury apparel industry are explored in this study. The aim of research was to determine and analyse the effect of the cashmere industry changes such as the advent of mechanisation, use of blended fibres, exposure to wider markets and lack of quality standards through the antecedents of quality and sustainability. For this, a single case study was conducted in Kashmir, India. Based on the ontological (constructivism) and epistemological (interpretivism) stance adopted in this study, data was collected using semi-structured interviews, observations, cashmere retailer websites and documents. The research findings suggest that in the cashmere industry, the issues surrounding sustainability and quality are complex, multidimensional and surrounded with obscure boundaries of the value chain operations. Due to mechanization and lack of industry standards, deteriorating socio-economic conditions of the artisan communities; especially, women spinners and weavers is observed. In contrast, mechanization promotes economic sustainability for the manufacturers and retailers which helps strengthen their market base. However, with this, artisan communities are rendered jobless who are dependent on their manual skills for sustenance as they have limited alternate revenue generation options. The results also indicate the lack of recognition of distinct product labelling options. This research proposes a conceptual model for the sustainable development of the cashmere industry and provides a policy mechanism to implement the proposed model. The research is expected to benefit academics and industry practitioners in the area of supply chain management.

Keywords: *Supply chain, Luxury fashion, Cashmere, Sustainability, Quality*

Smart-citizens for a Smart-city

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Abstract

A Smart-citizen for a Smart-city framework encourages citizens to become active participants in a movement towards building a smart-city. A Smart-citizen is someone who actively involves in the process of building their city into a better place on a cocurricular/voluntary basis. A focus on the technology used to make cities 'smart', rather than the people, neglects the importance of citizen participation in envisioning the scope of Smart-city and urban policy-making. The framework attempts to keep pace with the changing needs of citizens, cope up with disruptive technologies, start-ups, but also strives to make citizens digitally smart and innovative towards a successful Smart-city technology integration. These skills are urgently needed due to the rampant proliferation of the Internet of Things (IOT), sensors, automation, robotics, sustainability systems, as well as energy conservation initiatives that are behind building greener cities. The Smart-citizen movement actively promotes the concept of Smart-citizens, where citizens proactive steps and engagements are advocated in building a Smart-city, taking care of their health, lifelong learning, data literacy (Artificial Intelligence, Machine Learning, Data Governance, Data Privacy), skill development along with heritage preservation, culture, inclusiveness, morality, and civic laws, among other reasons. This program design, for framework integration in holistically building the individual and institutional capacity of Smart-citizens for Smart-cities, intends to do the following: (1) develop Data Literacy (Training and Professional Development), Data Governance, Data Mining and Tools and Technologies, Data Visualisation (Dashboards, Interactive Reports) Tools and Technologies and Artificial Intelligence and Machine Learning skills; (2) foster collaboration with other communities in building a healthy sustainable city along with developing ethical values, inclusive principles, as well as proactive roles towards relieving the effects of global warming and climate change, as well as caring for Health, Wellbeing, Inclusive Values and Diversity; (3). to develop entrepreneurship, Start-up Innovations, Co-creation, and Crowdsourcing, as such skills are expected to build a confident and dynamic collaborative community. (4). encourage citizens to lead Smart-city initiatives in safe, efficient, and reliable ways, especially in tackling post COVID19 challenges and difficulties together.; (5) fostering a deeper understanding of citizens needs, combined with the transforming of service

experience for citizens through embracing technological innovations and the integration of more

flexible digital platforms; (6). create a community of civic hacking

Measuring Baseline Performance and Quantifying Comfort Improvement in Home Heating

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Abstract

This presentation will summarise the results from a number of studies on a 3-bedroom New Zealand 100m2 house, used to measure the baseline performance and quantify comfort improvement with various low-cost interventions. The construction of the house is typical of New Zealand residential construction and is minimally insulated. Temperature sensors are fitted throughout, in the underfloor space, interior to the house, in the wall cavities and in the roof space. Temperatures have been recorded in the house since 2016 and are logged at either 3- second or 5-minute intervals. A heat pump located centrally in the living room of the house is generally set to heat to 18 degrees C. The interventions examined to date are installing bubble wrap on windows, attempting to give the benefits of double glazing, and isolating the living spaces from the bedrooms.

Data is checked using R software and multiple regression analysis is used to determine impacts of the interventions.

The baseline study results verify the poor performance of many New Zealand houses in meeting the World Health Organisation (WHO) standards for living spaces and bedrooms. In winter, in the evening, bedrooms were below recommended temperatures 80% of the time.

The low-cost interventions are statistically measurable, however in terms of occupant comfort would unlikely have a significant impact.

The house is also utilised as a teaching resource, including the use of data in teaching.

Keywords: *sustainability, energy, building performance, comfort*

Cold-formed Steel (CFS) as a Prefabrication Technology for Medium Density Housing (MDH) in New Zealand.

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Abstract

Medium density housing is recommended solution to address the affordability issues in New Zealand. However, traditional house building approaches have limitation to achieve the verticality considering time and cost perspectives. This study investigate the potential impact of Cold-formed Steel (CFS) as prefabrication technology for medium density housing (MDH) in New Zealand. Cold-formed steel has potential to utilize well in all the categories as an alternative of timber.

An open-ended questionnaire was used in interview survey with highly experienced industry practitioners (covering both North Island and South Island) who are using Cold formed steel as construction material and applying various prefabrication technologies to develop innovative housing solutions. Further, case studies focusing on various prefab categories were evaluated in context of MDH. Ethics was approved for research projects undergraduate diploma in engineering technology.

It has been found that 60% respondent agreed that CFS has highly positive potential impact towards using various prefabrication technologies to build MDH. However, a number of constraints has been reported as lack of standardization in products and increasing offsite construction share in building process by inclusion of panelised and modular components. Further, three case studies has been evaluated to determine the viability of the Cold-formed steel as prefabrication technology for framing, panelised and modular in context of MDH.

This research contributes to develop knowledge of innovative building technologies and their viability for MDH. Further, this study presented the supplier perspective regarding prefabrication technology and critical constraints to use. In the last, this study support the supply of MDH with application prefabrication technologies to address the communities concerns regarding affordability.

Keywords: *Medium density housing, prefabrication technologies, offsite construction, Cold-formed steel, constraints*

Identification of Offsite Construction Skills and Profiles

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Abstract

The main objective of this study is to identify the profiles and skills for offsite construction with a focus on design, manufacturing and construction disciplines covering AEC industries. The typology of offsite construction is defined as components, panels, pods, modules, complete buildings and flatpacks. The workforce in construction needs to learn the new skills to get work ready for projects using prefabrication and offsite construction at various scales.

A comprehensive review of relevant literature including books, academic articles, and industry sources, was conducted. Profiles were determined from professional and vocational perspectives. Skills were assessed based on managerial and technical perspectives.

A detailed list of skills has been developed and categorised according to profiles and their skill sets. Further, skills were classified according to disciplines as design, manufacturing and construction. Common skills were also identified with respect to professional and vocational. An attempt has been made to develop skill pathways in the offsite construction stream for the current and prospecting workforce.

This research contributes to developing a knowledge base for skills essential for the offsite construction workforce at all tiers in organizational view and all phases in the project view. This study helps academia to develop the qualifications; industry to understand the job specifications and communities to exploit the emerging prefab industry.

Keywords: *Offsite Construction, Prefabrication, Skills, profiles, AEC*

Resource Tagging for Identifying Safety Risks that Result from Deviation Between Work as Imagined and Work as Being Done

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Abstract

Construction site safety is one of the key performance indicators in determining the overall success of most of the complex construction projects. The primary step in ensuring a better safety performance is to identify a hazard that leads to a safety risk in real-time. Current practices for identifying hazards are driven by paper based stand-alone procedures involving workplace assessments and checklists which may not necessarily reflect the ongoing sequence of works in the site. Therefore, predefined task execution information in the form of safe work method statements can be deemed less useful due to their non-representativeness of the actual site conditions.

To overcome the above-mentioned limitation, this research aims to develop a conceptual framework that facilitates identification of safety risks using Quick Response (QR) code tagging to resources like materials, machines, and construction workers.

A combination of wireless network techniques and a system architecture that enables data exchange, location tracking of fixed tags using Maximum Allowable Movement Distance (MAMD) method will be used. The tolerances for work zone conflicts based on spatial and temporal data pertaining to a resource will be set based on on-site experiments conducted in controlled conditions. It is anticipated that the conceptual framework form basis for the automated identification of safety risks using digital technologies.

Implications - The key personnel associated with the management of construction site safety would be the beneficiaries of this work as it solves the problem of loss of task execution information that is vital for producing a current site-specific safety plan.

Keywords: *Automated monitoring; Resource tagging; QR code; Work zone conflicts*

Road Construction Project: Material Reconciliation

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Abstract

This research aims to establish a variance of material expended for a road construction project against material claimed in progress payments on a re-measure type contract for a main contractor. The explanatory case study was conducted with access to details of progress payment claims, contract documents, rate analysis, records of material purchased by head office, received at the site, and issued for construction. The project documents were investigated to determine the amount of sub-base purchased and arose from the site, and the amount of aggregate road base, cutback bitumen, asphalt, tack coat and prime coat purchased each month. The amounts of each material claimed through each progress payment were established using rate analysis of all related bill items. The case study revealed that the claimed quantity of materials only represented 60% to 84% of the issued quantity to the site for construction. The material generated through cutting process is not suitable to be used directly as sub-base material. Costs should incur either in processing them to become suitable or disposing them.

A reporting system was established to identify quantity purchased, received at the site, issued for the work done and claimed through payment claims for each month and for each material. This method of reporting, with an ongoing tracking mechanism, is recommended as a process improvement for future road projects. The benefit of this research includes increasing research capability and confidence in the construction school and providing insights to the industry on how to handle materials in road construction.

Keywords: *Material reconciliation, road construction, progress payments, quantity, cost.*

Risk Assessment of Liquefaction-Induced Ground Damage in the Puketoka Formation of Auckland, New Zealand

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Abstract

The major earthquake events worldwide have highlighted the impact of soil liquefaction on the built environment. A good understanding of the areas where liquefaction damage is possible is important for good land use planning and to allow developers and asset owners to appropriately address the risk. This paper presents the different levels of assessment using multiple approaches to identify the likelihood of liquefaction-induced ground damage of puketoka formation present in the Auckland region, New Zealand. This formation predominantly consists of a heterogeneous sequence of interbedded fine-grained sands, silts, and clays derived from volcanic ash and tuff, estuarine peat, and coarse-grained soils. It is mapped as "pumice" in Qmap and identified as alluvium with volcanic content in the developed maps. While in the field, engineering geologists often do not distinguish between Puketoka Formation and general alluvium in producing geotechnical borehole logs. The geological map and reports indicate that Puketoka Formation contains pumiceous grains though these are often not picked up or described by engineering geologists. Recent detailed desk studies for liquefaction assessment for this formation showed that the Puketoka Formation loose sands and sandy silts are potentially liquefiable due to ground shaking from earthquakes with a return period as low as 100 years with increased consequential effects (greater settlement and greater risk of lateral spreading) for earthquakes with a return period greater than 250 years. The methodology adopted from the Ministry of Business Innovation & employability (MBIE) is followed to address the liquefaction vulnerability for these soils with qualitative and quantitative approaches. This gives insights into the liquefaction mechanism and recommendations that how to deal with this formation for liquefaction assessment.

Keywords: *Earthquake, liquefaction, Auckland soils*

Symposium Session Streams: *Health and Nursing*

The following section contains published abstracts from the OPSITARA 2021 Research Symposium sessions relating to Health and Nursing. This includes the broad themes of:

- Health Issues
- Nursing Practice
- Human Physical Performance
- Nursing Careers

Proposal for Possible Change of Management of Nausea and Vomiting in Pregnancy at the 24-Hour Surgery

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Abstract

Pregnant women presenting with these chief complaints are often treated at Urgent Care Clinics or Emergency Departments. Timely management of women presenting with Nausea and vomiting in pregnancy (NVP) and Hyperemesis Gravidarum (HG) is crucial in order to prevent or minimize complications. As part of a special topic, a clinical project has been developed with a background discussion of the clinical issue of pregnancy-associated nausea and vomiting. This involves the development of a draft nursing pathway to manage different types and levels of severity of NVP. The question which underpins this project is "How can early treatment benefit pregnant women presenting with Nausea and Vomiting and Hyperemesis at an Urgent Care facility?"

In order to support the justification for the development of a nursing pathway for NVP, a 4-month retrospective audit of existing practice at the 24HS was undertaken, with certain parameters used. Following this survey, examples of both effective practice and an opportunity for change in practice have been identified. Early interventions are used and most effective for injury-related presentations, and only occasionally on the medical cases, such as NVP/HG.

Discussions on the findings conclude that an NVP pathway will provide early interventions for this patients' groups, therefore achieving the objectives mentioned above. It is believed that the development of an NVP pathway, could both improve the journey of this patient group and also act as a catalyst in developing other pathways leading to further expansion of the 24HS service.

Keywords: *Nausea and vomiting in pregnancy, Hyperemesis Gravidarum, differential diagnosis, Complications, Urgent Care facility, Early interventions.*

Childhood Obesity

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Abstract

In New Zealand, 1 in 3 children are overweight or obese, a number that has doubled over the last 4 decades. Poor nutrition choices contribute to the problem of childhood obesity. In New Zealand's health and physical education school curriculum, food and nutrition are specified as 1 of the key components of learning. Changing dietary behaviours has proven difficult. Serious games are increasingly being used in behaviour interventions due to the rapid growth and accessibility of digital technology. Hence, we previously explored the perceptions of New Zealand parents and children on video games for nutrition education using a qualitative research design using focus group interviews. Sixty-two children (7-11 years) took part in 10 focus groups and 5 participatory game design workshops. Ten parents completed the online questionnaire. Content analysis was carried out, and meaningful sections of text were systematically and sequentially coded and categorised following a general inductive approach. Both children and parents reported that video games offered an avenue to increase nutrition knowledge. However, negative views such as screen time usage needs to be addressed before widespread adoption. Future work is being planned to investigate: 1. whether the digital game tool can be used to increase nutrition knowledge; 2. how the incorporation of active video games and nutrition education can be combined to promote healthy behaviour changes; and 3. how can the use of behaviour mechanics in the digital tool can help address some of the negative views towards screen time usage.

Caffeine Levels in Yerba Mate Tea

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Abstract

Yerba Mate is a popular South American beverage made from the dried crushed leaves and stems of the holly tree (Ilex paraguariensis). It's use is becoming widespread due to stimulatory properties, mainly from caffeine, plus purported health benefits from antioxidants (Cardozo & Morand, 2019). Little has been published on the caffeine content of traditionally brewed Mate. A caffeine intake higher than the recommended daily intake (RDI) of 400mg may cause insomnia, anxiety, and increased heart rate (Food Standards Australia New Zealand, 2021).

Briefly, traditional brewing uses a gourd packed with crushed dried Mate. Hot water is poured down one side of the gourd, leaving the top layer of leaves dry. After steeping for 30 seconds a sieving straw (bombilla) filters and delivers the infusion.

Without replacing the Mate, hot water is added after drinking the infusion (every 20-30 minutes), producing 800 to 1000ml of tea. The aim was to determine the total caffeine consumed from traditionally brewing 50g of Yerba Mate. Brewing was simulated under laboratory conditions. After each steep, liquid was removed using a bombilla attached to a suction pump. Caffeine was measured in each extract using reversed-phase ultra-performance liquid chromatography (RT-UPLC) in a method adapted from Colpo et al. (2016). The first 5 extractions produced the highest concentrations (1000mg/L). The last (24th) extraction contained 250mg/L. The total caffeine was 460mg; and exceeded the RDI by 15%. These results signal a caution. If Yerba Mate was brewed like black tea, three or four cups would result in a significantly higher caffeine intake. This project introduced a unique cultural dimension to the class of international graduate students. It fostered student engagement and produced useful findings.

Keywords: *Yerba Mate, Caffeine, RT-UPLC*

Nutritional Value of Hemp Seeds

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Abstract

Hemp seed products are considered to be under-utilised for human consumption. Previous research has typically focused on health benefits of hemp seed oil due to its high concentration of unsaturated fatty acids. Farinon et al (2020) reported that hemp seed oil is also rich in natural antioxidants and bioactive components such as tocopherols (the major forms of vitamin E). There has been limited research on the tocopherol content in hemp seed oil and the aim of this study was to address this. Using reversed-phase ultra-performance liquid chromatography (RT-UPLC) the α-tocopherol concentration was determined in cold-pressed hemp seed oils from two different manufacturers. The RT-UPLC method of Bakre et al. (2015) was modified by Dr Barbara Dolamore. To validate results, spike analysis was performed and showed a mean recovery of 95.2%. Preliminary results for the of α-tocopherol in the two products were 49mg/L, and 43mg/L. Our results were higher than those of Teh (2013) who reported 28mg/L. In both studies α-tocopherol levels were substantially lower than other popular vegetable oils e.g., sunflower, soybean and rice bran oils have a range of 170-330mg/L (Desai, 1988). Overall, hemp seed oils had three-to-six-fold lower levels of α-tocopherol levels than many other vegetable oils. Repeating the method with increased sample replications would improve the robustness of this study. This project was undertaken as part of the requirements of a graduate programme in laboratory technology. A real-life scenario such as this and industry relevant techniques helps to foster student engagement and produces findings that can have value in the commercial sector.

Keywords: *Hemp seed oil, RT-UPLC, vitamin E, tocopherol*

Nurses' Perceptions and Practices of Family Engagement in Adult Intensive Care Units

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Abstract

Aim: To describe nurses' perceptions and practices of family engagement in adult intensive care units from a global perspective.

Ethics: Ara, University of Otago and CDHB

Methods: Using a qualitative-descriptive multisite design, the study was carried out in 26 adult ICUs of 12 ICU facilities in 10 countries. Semi-structured, individual interviews were held with ICU nurses.

Design: A qualitative-descriptive multi-site design using content analysis.

Participants: 65 registered nurses participated, with mostly holding an intensive care certification (72%) and had worked on average 10 years in the ICU.

Three overarching themes:

Theme 1: Nurse-family engagement was found to be suffused with power that was negotiated and carefully balanced within the nurse-family relationships. Information sharing with family shifted depending on who needed what information and who held the information.

Theme 2: Family engagement practices reflected constant fluctuations in nurses' practices, vacillating from day-to-day, shift-to-shift and nurse-to-nurse. Variations in engagement practices were influenced by each nurse's attitudes, beliefs, fears, and insights.

Theme 3: Family engagement was shaped by the ICU context, a dynamic interaction between the team culture, collaborative relationships and ICU structures and resources.

Implications

There is increasing awareness of the importance of supporting family members in order to improve outcomes for the family and the critically ill patient (Harvey & Davidson, 2016). The aim of the research was to inform patient-family engagement, which contributes to best practice.

Keywords: *family, ICU-nurse, engagement, global, multi-site*

The Experience of Nursing Students Placed at Managed Isolation Quarantine Facilities (MIQF)

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Abstract

Coronaviruses are a diverse family of viruses that cause infections in both humans and animals and include the common cold amongst others. A novel coronavirus (SARS-CoV-2) Coronavirus (COVID-19) was detected in Wuhan, China in December 2019 (WHO,2020b).

The NZ COVID-19 Alert System of four levels was initiated in March 2020 by the New Zealand Government to minimise the risk of COVID-19 spread. In addition, all international arrivals to Aotearoa/New Zealand are required to complete a 14-day period of isolation in a Managed Isolation Quarantine Facility (MIQF) prior to entering the community.

A dedicated nursing workforce has been employed by the Canterbury District Health Board to work in the MIQF's. There are six of these in the South Island, all located in Christchurch (Canterbury District Health Board (CDHB), 2020). Ara Bachelor of Nursing student nurses have been allocated to MIQF's for clinical placement in their third-year community placement. This is a unique situation given that no other nursing schools in Aotearoa/New Zealand are using these facilities as a placement opportunity. The current pandemic offers a singular opportunity to explore the experiences of student nurses allocated to this clinical setting.

This project will allow the researchers to document an important milestone in the history of NZ nursing. To date few studies have been published about NZ nurses working during the 2020 pandemic, therefore this project will be a significant contribution to the body of NZ nursing knowledge.

Keywords: *Student nurse, clinical placement, BN, COVID-19*

Research Influencing Practice: A Real-World Example

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Abstract

Aim: To investigate the need for improved inter-professional Parkinson's education in New Zealand (NZ) and identify the optimal methods to achieve this.

Research methodology: This comprised a literature search of Science Direct, ProQuest, PubMed, Google Scholar, the website of the NZ Brain Research Institute; an interview with a Parkinson's nurse, consultation with the Clinical Director of Parkinson's NZ, and consultation with Canterbury District Health Board staff.

Ethics approval: This was not required.

Findings: A prevalent gap in Parkinson's care exists due to the diverse and extensive needs of people with Parkinson's, the shortage of neurologists, lack of formal education for Parkinson's nurses and limited educational support for general practitioners. In addition, there are limited (n=26) Parkinson's NZ nurses for the 11,000 people with Parkinson's in NZ. A rapidly increasing incidence of Parkinson's is exacerbated by the aging population. This gap in care could be reduced through establishment of a clinical nurse specialist (CNS) role by district health boards and by inter-professional education.

Implications for our teaching, industry and the community: A sustainable approach is needed beginning with education that equips nurses for a CNS position. This could consist of a postgraduate diploma that includes advanced pathophysiology, health assessment, pharmacotherapeutics, and neurology by NZQA approved tertiary health educators. Nurse prescribing, the nurse practitioner pathway and master's research would further increase the skill of the Parkinson's CNS. Evening and weekend courses for general practitioners could be organized through public health organizations including Pegasus Health, the South Island Alliance, Canterbury Clinical Alliance.

Improving the Kayak Racing Wing Paddle

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Abstract

The aim was to analyse the performance of the Epic Midwing endurance kayak racing paddle in terms of lift and drag, and to redesign the paddle to match drag and increase lift in order to improve performance for the same energy expenditure.

The existing paddle was modelled in CAD and flow was simulated in CFD in order to determine lift and drag measurements. The model was printed off at half scale on a 3D printer, then covered in small cotton tufts and placed in the wind tunnel at Ara Institute of Canterbury to visualise which angles of attack created attached flow, which caused separation over the paddle, and which angles of attack were optimum. The same process was carried out with new paddle designs and a comparison made between all the paddles. The best paddle design was then built using carbon fibre and tested in the water by the kayaker for feedback.

Wind tunnel testing of the redesigned paddle indicated between 1.6% and 9.5% more drag than the existing paddle, but increased the lift between 11.2% and 38%. From this testing the thrust force increased between 5.1% and 28.8% at all angles of attack, resulting in a predicted improved performance for the same energy expenditure.

The project shows how our facilities in Engineering can be used to help design new products for a competitive advantage. It also helps students to use and see how the knowledge they learn is applied to real life applications

Keywords: *Wind tunnel, sports engineering, kayaking, drag and lift*

The Physical Demands of Kī-o-Rahi Competition

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Abstract

Kī-o-Rahi is a traditional Māori ball game that encompasses the Māori world view (Palmer et al., 2009). Recently, the game has experienced a revival with ~50,000 players nationwide, including secondary school students who participate in annual regional and national tournaments (Palmer et al., 2009; Pillaar, 2011; De Graf, 2013; Brown 2010; 2013; www.kiorahi.com). To our knowledge, there are no published studies on the physical demands of Kī-o-Rahi. This information could be useful to develop specific training programmes for competition, and also to determine if Kī-o-Rahi could be used in Kaupapa Māori programmes to improve health outcomes. Therefore, the aims of our research project are: 1. To Quantify the physical demands of Kī-o-Rahi competition and 2. To determine if participation in Kī-o-Rahi meets exercise prescription guidelines for improving health. This presentation shows preliminary findings from the Canterbury secondary schools' tournament. Informed consent was obtained, and the study had institutional ethical approval. Players (n=16; 9 females, 7 males) wore 10Hz GPS units during five of six 20min-matches in the tournament. On average, players covered 1129±256 m per match of which 484±126 m and 64±13 m were at ≥7.1 km/hr and ≥16 km/hr respectively. There was a trend for distances to decrease in later games despite the number of substitutions being similar, which suggests fatigue accumulated throughout the day. We found participation in a Kī-o-Rahi tournament was physically demanding, therefore specific training and coaching strategies may be required to ensure players are prepared for the demands of competition. Anecdotally, the game was of sufficient intensity and duration to improve fitness. However, further analysis and data collection including heart rate measurements is needed to answer the second aim of the project.

Keywords: *Kī-o-Rahi, exercise, team sport, Māori, indigenous*

Modelling Human Strength – Are We More Complex than Robots?

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Abstract

To perform any movement, four steps must happen. First, our neural system recruits the required muscles. Second, the muscle contracts, an ability influenced by its size and architectural design. Third, the tendon transfers this muscle force to the skeleton, the transference influenced by its stiffness. Fourth, the joints of the skeleton then rotate around their axis.

Muscle strength is a key determinant of movement, yet the relative importance of the above to produce strength differs across individuals. This variation ensures that individually-optimised exercise training plans and targeted interventions cannot yet be developed.

This study examined the relative influence of those variables on maximal isometric, concentric and eccentric knee extensor torque in 54 healthy men (athletes and untrained; aged 18-40 y). Person's correlation coefficient was used to assess between variable relationships. Linear regression models were used to quantify the variance explained by combinations of predictor variables using an information-theoretic approach for model selection based on Akaike's Information Criterion (AICc). The best-fit model that explained up to 72% and 62% of the variance in maximal isometric and eccentric torque (AICc weight = 0.51 and 0.34 respectively) included muscle size and design, the neural activation of your quadriceps, and your voluntary activation ability. The best-fit model explaining 64% of the variance in maximal concentric torque (AICc weight = 0.19) also included muscle size and design, but combined with moment arm distance (the leverage) of knee joint. These models allow the identification of potential variables to target (i.e. weaknesses) for individualised training programs.

Resource Development to Decrease Drinking in Young Athletes

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Abstract

Previous research shows that young adults, including athletes, are prone to hazardous drinking (HPA, 2012; MOH, 2019). According to Barnes (2014), even a small amount of alcohol impacts on sport performance and recovery. Our aim was to explore the perceptions around alcohol intake and develop a resource that is acceptable for this group. The study received ethical approval from the Ethics committee at Ara Institute of Canterbury.

We conducted two focus groups with athletes (18 to 24 yeas of age) who regularly consume alcohol. During the first focus group we explored their views on consuming alcoholic beverages and awareness and acceptability of current initiatives. The focus group was transcribed verbatim, and data from the transcripts were categorised into major themes. Participants identified that simplicity, humour, and relevance to New Zealand culture were the main features of relatable initiatives. Social media was the main source of their information. Additionally, they commented on the influence of coaches and expressed enthusiasm for free merchandise.

To incorporate the above desirable features, we decided to design a set of stickers and the hashtag #whatthecoachsaid for social media content. Respondent validation was performed through a second focus group. Participants valued the simplicity of the stickers, the relevance of the hashtag; they showed a strong preference for the brief messages on yellow background. These findings suggest that although young athletes still want to enjoy alcohol, there is a potential to decrease their drinking through effective relatable resources and thus limit the effects of excessive alcohol consumption.

Keywords: *alcohol, hazardous drinking, young adults, athletes, resource development*

Generation Z RNs (2020) 'Commitment to Nursing' Compared to Generation Y RNs (2010)

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Abstract

Aims:

1) What motivated this generation to choose nursing as a career option?

2) What are the future work and career plans of these nurses?

3) How long do these nurses intend to stay in the nursing profession?

4) What push and pull factors are influencing these nurses to either remain in, or exit from, the nursing workforce?

Design: Nation-wide on-line survey (n= 629)

Ethics approved by the Ara Human Ethics Committee

Findings/Implications

Data analysis is in progress, preliminary findings suggest that Generation Z nurses are happy with their choice career, at least for now. Although they wish to pursue a career in nursing, they do not view nursing as a lifetime career. Therefore, the profession needs to consider how to retain this highly skilled workforce to avoid high levels of turnover.

Keywords: *Nursing, Generation Z, workforce*

Nurses Experiences and Perceptions of Living and Working with a Disability: A Qualitative Descriptive Study

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Abstract

The New Zealand Disability strategy (2016-2026) describes the responsibilities of society so that people with disabilities or impairments are not discriminated against or excluded from employment opportunities. Despite guidance and strategies available to support nurses with a disability there remains varying levels of understanding by employers, colleagues, and others.

A qualitative descriptive study explored the perceptions and experiences of registered nurses with a disability or impairment in order to answer the research question: How do registered nurses who live and work with a disability or impairment, negotiate their roles and responsibilities within their clinical workplaces? Ethical approval was granted by the Ara Human Ethics Committee (April,2019). Purposive sampling and a snowballing strategy resulted in ten registered nurses, who worked with a disability or impairment, participating in a semi structured interview conducted by one researcher for consistency. The data gathered was analysed using an inductive process.

This resulted in four key themes described as Impairment or Disability? telling others, getting support, and Impact in the workplace. Nurses described the impact of the disability or impairment on their working lives was more important than a definition and all were committed to safe nursing practices. The degree of visibility or invisibility of the disability or impairment influenced their willingness to ask for help or support. Accommodations were not made for nurses with disabilities because many did not feel safe to disclose their disability or impairment or were unaware of their rights. A recommendation for organisations is to employ a dedicated resource person to ensure consistent advice is available to nurses working with a disability or impairment, and their colleagues and managers.

Keywords: *Nurse, disability, impairment, disclosure, accomondations*

Working Overtime: Factors Which Influence Nurses' Decisions to Continue or Cease Working

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Abstract

AIM: The aim of this research project is to explore the factors that influence nurses to continue or cease nursing.

RESEARCH DESIGN/ METHODOLOGY: THis project is based on a qualitative research design. The project involved conducting interviews on six Registered Nurses- all had nursed for many years and all were around retirement age. Verbal permission was granted by participants to be emailed information pertaining to the project which included the Declaration of Consent and a range of possible interview questions. Participants could then respond to the interview questions in writing, or participate in a face or telephone interview. The prepared questions were used in a semi-structured interview style with open -ended questions which ensured that the intended topics and themes were addressed but gave flexibility and the opportunity to gather comments which may not have been included in the original question set. Because of Covid 19 restrictions, it was considered prudent to allow participants to respond to interview questions through methods other than face/ contact interviews.

ETHICS APPROVAL: Because the project involved human participants, ethics approval was sought from the SIT Ethics Committee and was granted in May 2021.

RESULTS/FINDINGS: The provisional results of this research indicate findings very similar to those uncovered in a comprehensive literature search conducted on the topic in 2020. There are a range of personal and professional influences that determine whether nurses around retirement age continue or cease working.

THE IMPLICATIONS FOR INDUSTRY/ COMMUNITY: The implications for the health sector and our community on whether nurses cease working around retirement age or continue to work beyond that point are profound as there are nursing shortages across New Zealand, made more poignant by the current Covid -19 pandemic.

Keywords: *Nurse Retirement, Interview, Influence, Pandemic.*

Symposium Session Streams: *Learning and Delivery*

The following section contains published abstracts from the OPSITARA 2021 Research Symposium sessions relating to Learning and Delivery. This includes the broad themes of:

- Blended Delivery
- Culture and Pedagogy
- Teaching and Learning
- Social Issues in Pedagogy
- Recognition of Prior Learning
- Learners
- Practices in Industry

Using the Simulation Modality of Mask-Ed™ (KRS Simulation) During Lockdown

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Abstract

Background:

During lockdown the need for creativity to teach communication, empathy, caring, and compassion to nursing students was achieved using the simulation modality of Mask-Ed™ (KRS Simulation).

Setting:

The simulation was delivered live via our learning platform, Blackboard.

The students were introduced to the Mask-Ed character (Wallace) via a video that had been created prior to the live simulation. When Wallace appeared live on-line, he began by discussing how lockdown was impacting him and his wife, and emotionally explained that he had a fall earlier in the day.

Research Aim:

To reflect on our experience of using Mask-Ed as an on-line teaching method through a one-act ethnodrama.

Research Approach:

Our ethnodrama is a co-creation between two educators, one who assumed the role of Wallace, and the other who observed and supported Wallace and the students. The ethnodrama was created when we returned to campus to reflect on our experiences.

Ethical approval was not required for this study.

Findings & Implications for our teaching:

The use of Mask-Ed via an on-line format required caution and thorough preparation. Wallace was able to teach communication, empathy, caring, and compassion, through the genuine human connection developed between him and the students. While the actual learning success of this simulation may never be known, the reflection through our ethnodrama highlights the educators' experiences and the perceived success of this simulation.

Keywords: *Mask-Ed (KRS Simulation); Ethnodrama; On-line teaching; Reflection*

Lock-down Challenges to Remote Learning

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Abstract

The purpose of this research is to identify and assess the challenges faced by teaching staff and students in remote learning environment during countrywide lockdown in 2020. A mixed methods approach was employed by using semi-structured interviews and surveys with teaching staff and students. All the necessary approvals for ethics were obtained for the project. Results and findings from the analyses found that although the teaching staff immediately adapted the needed online delivery environment, they faced significant challenges to attain students' engagement in remotely delivered online sessions. Lack of appropriate policies, guidelines for engagement, and students' unexpected behaviours were found to be few of the elements that contributed in staff's online teaching experience as 'unenjoyable'. Students, on the other hand, highlighted challenges with digital tools. Survey results indicated that majority of students appreciated and acknowledged the fact that their teachers adapted the teaching material and assessment activities suitable for online environment. Students' responses however, indicated frustration for being forced into the remote delivery while they chose for a face-to-face delivery. Lack of previous experience in using digital tools and motivation for doing so were highlighted as factors contributing to lack of engagement in online learning environment. Despite the challenges, the participants agreed that there is an opportunity to embed digital learning along with face-to-face delivery. This further creates the need for professional development opportunities for remote delivery, and adopting bi-modal pedagogical approaches in future iterations of courses and programmes.

Virtual Reality as a Teaching and Learning Tool in Midwifery Education

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Abstract

Virtual reality is an emerging simulation tool in midwifery and health care education, however, there is little evidence of how that teaching and learning is experienced by the participants or how this technology influences pedagogical approaches.

Simulation in healthcare settings has been recorded for over 1500 years (Rosen, 2008) and has adapted synchronously to support learning; from the early use of animals and cadavers through to the development of task trainers and computerised mannikins in more recent years (Owen, 2016; Rosen, 2008).

A virtual reality birthing woman has been developed by a multi-disciplinary team at Ara Institute of Canterbury and Virtual Medical Coaching an EdTech and VR simulation company.

I am currently a PhD candidate at Auckland University of Technology. My research questions are 'What are the lived experiences of virtual reality as a teaching and learning tool for midwifery educators and students?' and 'What is the emerging pedagogy in VR midwifery education?'.

An interpretive hermeneutic phenomenological approach will be adopted to guide the research design, method, and analysis to answer the research questions and aims. Ricoeur and other hermeneutic philosophers explore the interpretation of experiences to understand the meanings within them. He explains this prefiguration, configuration, and refiguration - these concepts will be used for the conceptual framework for analysis of data. (Nankov, 2014; Ricoeur, 1990)

The findings of this research will be used to inform and add to the body of knowledge regarding the use of simulation in midwifery and healthcare education

Ethics application is in progress

Keywords: *Education, simulation, virtual reality, midwifery*

Ko te Haruru o Rūaumoko – Impact of the 22nd of Feb 2011 Earthquake on Teaching and Learning 10 years later

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Abstract

Māori Pedagogies are paramount to teaching and learning for the Indigenous peoples of Aotearoa. These were used during the recovery phase of the Feb 22nd Earthquake. This report will cover how these pedagogies were used and the impact these had on Māori kaiako and ākonga. The research was undertaken through recording Māori kaiako re-telling their stories 10years later.

The key questions were:

How did Te Puna Wānaka Academic staff respond to difficulties in the teaching environment arising from the 2011 Christchurch earthquake sequence?

How did Māori pedagogies feature in and/or support Te Puna Wānaka Academic staff members' responses pertaining to teaching and learning post-earthquake?

This was a qualitative study framed by a constructivist - interpretivist approach in terms of the collection and analysis of data. Semi-structured interviews were used to gather perspectives from six Māori kaiako re-telling their stories. Ethics approval was granted in 2020 by the ARA Ethics Committee.

The main conclusion was that Māori pedagogies provided strategies and skills to cope with the changing circumstances in a time of crisis. A key finding of this was that Mana whenua was established, and from this safe and trusting environment, Māori pedagogies were adapted to the situation and the ākonga flourished in their learning. The research shows that under traumatic events Māori Pedagogies are very effective and create a whānau environment that supports the ākonga and allows learning on many levels. The pedagogies discussed in the interviews were whanaungatanga, manaakitanga, kotahitanga, aroha, whakapono and the concepts of Ako, Tuakana/Teina and Te Whare Tapawhā. I mahi ngatahi tātou katoa, ahakoa ko wai.

Keywords: *Māori pedagogies; teaching and learning*

Perceptions Around Learning Support for Samoan Nurses

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Abstract

The aim is to explore Samoan Nurse's perceptions on the effectiveness of supports through their study. It seeks to promote opportunities for improvement, with recommendations that weave together government, institutional and student perspectives. Using the Fa'afaletui research methodology and philosophical framework this study considers government policies for tertiary education, the tertiary institution's policies for Pacific students, and the perspectives of Samoan nurses.

Fa'afaletui as a verb, refers to the methodology of collecting data. Fa'afaletui as a noun refers to the sharing of results, Fa'afaletui will assist to weave together the collective knowledge and perspectives to reach a consensus (Rimoni, 2017), this can be viewed as the following:

"Top of the mountain" - Reviewing government policy

o In reviewing policy of Pacific-related key performance indicators (KPIs) government strategy documents for supporting Pacific learners of the past five years 2015-2020

"Top of the tree" – Reviewing institution

o A review of Pacific interventions specific to tertiary institution's Pacific Strategy 2017-2020

Outcome 1: Pacific students participate, progress, and achieve qualifications.

"Person in the canoe" – Reviewing Samoan Nurses perception

o Interviews with three Samoan Nurses to understand of what contributed to their 'participation, progress and achievement' and effectiveness of strategies implemented

o Samoan nurses have completed their nursing registration between 2017-2020

Emerging findings will be discussed with the anticipation that the benefits of this research to the tertiary Institute will assist for quality improvement purposes, financial and human resource efficiencies and outcome-based strategies that can assist with Pacific student success

Keywords: *Pacific, Nurses, Samoan Methodology*

The Māui Mua Project

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Abstract

The Māui Mua project aimed to analyse the learning experiences of Māori Ara graduates using a framework informed by the Māui narrative. An outcome of this analysis was to better understand key factors which influenced the learning journey at Ara for Tauira Māori /students. In addition, the findings of this study have informed the Māui Te Tauira pastoral support, mentoring programme and teaching practice at Ara. Overarching research questions:

1. What were the skills, attributes and strategies needed, for tauira Māori to be successful graduates?

2. What support mechanisms were needed to promote successful tauira Māori?

3. How had Māori graduates transferred their learning from being tauira at Ara to new learning situations?

The Māui Mua (Graduate Interviews), research project was designed as a qualitative inquiry using the theoretical framework for data collection from a framework informed by Joseph Campbell (1993) Heroes Journey, the Māui narrative (Robinson, 2008) and Te Whare Tapa Whā (Durie, 1994). Six Tauira Māori, first generation learners who graduated with a Māori language degree from Ara were interviewed (45-60 mins in length). The recordings were recorded, transcribed and analysed using thematic analysis. Ethics approval was given for this project in 2021.

It was found that the six graduates were all participating in the community in important roles supporting Kaupapa Māori. They articulated a transformational process from trials and challenges as tauira, the times they wanted to give up and what they needed to keep going to complete their study. It was evident that Māori values and tikanga were central to their learning and provided the motivation and energy core to their success. The essence of their narratives has validated the efficacy of the principles and practices of the Māui Te Tauira programme.

Keywords: *Māui, Māori values tikanga tauira*

Emotional Intelligence in Teaching and Learning

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Abstract

Whether the decision to grow and change is our choice or forced on us through circumstance, our resolve to harness the power of our emotions means our ability to deal with change is easier, and situations become less overwhelming. Emotions carry internal energy that we can use to build our emotion management and resilience.

This paper aims to inform and support academics' emotional intelligence self-development that then transfers into overall emotional environments in learning situations. Thus, student's emotional intelligence is also developed.

This paper is the outcome of extensive research and workshops on emotional intelligence development, to develop and design guidelines and practices to strengthen emotion management and resilience.

Implications of emotional management development are the ability to reflectively engage or detach from an emotion depending upon its judged informative-ness or utility…by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey. How we express our emotions is an important aspect of managing our emotions. Alignment between thoughts and emotion helps us connect meaningfully and accurately with people and provides an effective platform for developing our resilience.

Keywords: *emotional intelligence, self-development, emotion management, resilience*

Joining the Dots- Visually Literacy in Learning and Teaching

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Abstract

Our image-saturated, screen-based world is dictating what it means to be literate in the 21st century. Visual imagery is no longer an adjunct to other forms of information; it is a primary form of communication. Technology has made it easy to consume, create, and share visual media. However, this does not mean that our learners or teachers are visually literate.

Visual literacy (VL) is not about making art, graphic design, or 'just a pretty picture' – it is a skill applicable to any discipline and daily life. VL is identified as a vital 21st century skill for both our learners and those who teach (Lundy & Stevens, 2015). However, as a learning & teaching tool, it is often overlooked or misunderstood as an 'art thing'. According to Kęrdra's (2018) review of visual literacy definitions, there are three categories of skills:

1) Visual readings skills - the ability to 'read', interpret, and analyse visual content

2) Visual writing skills - the ability to use and create visuals to communicate effectively

3) Other literacy skills include visual thinking and learning skills, critical thinking, and image use (such as the ethical and socio-political issues in image creation, usage, and sharing.)

This presentation will review some of the visual learning activities currently used at Otago Polytechnic, and outline a proposed project working towards the development of a kit of visual activities for learning and assessment. The aim is to promote visually-led teaching to become a common and recognised practice, rather than an exception, within higher education.

Keywords: *visual literacy, cognition, pedagogy, interdisciplinary, assessment*

The Micro-Investigator Programme and the Demystification of 'Science'

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Abstract

Microplastics – plastic particles smaller than 5 millimetres – are a major threat to wildlife, ecosystems, and human health. While research on the topic has flourished in recent years, public awareness of the problem, which hinders the possibility for the behavioural change necessary to curb microplastics emissions. To address this gap and to better understand the state of our rivers, we have created a citizen science programme for elementary students called Micro-Investigators. By utilising a simplified protocol to collect microplastics from waterways Micro-investigators seeks to 'make the invisible visible', demystify science, and raise children's awareness of the problem. After receiving the approval from the SIT Ethics Committee, we distributed questionnaires to all teachers involved to assess its impacts and verify its alignment with the school's curricula. Some of the teachers also agreed to follow up phone interview expand upon their answers. Descriptive statistics were utilised to summarize the responses. All participants agreed that taking part in the Micro-Investigator programme prompted students to share their experience with their whanau and stimulated further in-class discussion. The teachers also confirmed that the programme was in line with their local curriculum and that students were excited by the river sessions. Yet, the teachers did not notice a clear link between participation in the Micro-Investigator programme and a demystification of 'science' due to the project only running for one session. Therefore, future sessions will include tools to prompt an in-class reflection on their work as scientist while on the river and their findings.

Keywords: *Microplastics, Citizen science, Environmental education*

Education Outdoors Emotions and Memory

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Abstract

This presentation is based on a thesis completed as part fulfilment of a Master of Education at the University of Canterbury. The objective of the study was to explore to what extent emotions aided memory and learning in the context of a course within a degree programme. The research was an exploration into how much the emotions were involved in those strong memories and deep learning encounters.

Thirteen participants were interviewed with a focus on recalling memories and learning with unsolicited responses. Emergent theme analysis was used to identify key emotions experienced during and after the learning experiences. Then, Nvivo searches revealed which emotion words had been used the most and aligned their use with each experience or lesson. Further narratives around the emotions themes were analysed.

The findings were numerous and are aggregated and summarised below:

• Emotional engagement is present in learning- especially deep learning

• Experiential methods augment emotional engagement

• The outdoors is an impactful learning space

• Emotions and experience can engender high impact learning encounters and support life-long learning

• Modelling strong experiential teaching methods in the training of educators, results in them using such methods and having lasting impact on their learners.

The principal conclusions are that emotions are essential in the learning process and that an unsettled emotional state impacts negatively on learning. The presentation will support these findings with literature from education, psychology, and neuroscience, and give insights into why teaching about, for, and through emotions, is a method that enhances deep learning and resilience.

Keywords: *emotion, experiential learning, outdoors impact*

Three-tier Processes of Inclusion that Value Diversity

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Abstract

Integration of old educational strategy into newly learning techniques is potentially useful in responding to changing needs of learners' post-COVID-19. Borders shut-down open up new norms of learning opportunities, bringing together learners from diverse backgrounds, practices, and needs. Through deep reflection of our previous and current practices, we have developed a Model of Practice (MoP) that shapes our personal and professional identity as educators. The MoP evolved from, our personal histories and backgrounds that defined our identity and uniqueness as individuals, to our professional growth as practicing professionals in the industry to academics. We have significantly developed our understanding of effective learning and teaching practices through the development of the MoP. We found that learning happens in culturally appropriate social situations, among learners and between teachers and learners, depending on learners' culture (Vygotsky, 1978). We also found that education should aim for developing a holistic and balanced growth of personality of individuals, achieved through theories and practice. This MoP is driven by the works of Al-Ghazali and Al-Attas which focus on the intertwining relationship between knowledge, human development, and values. The MoP encapsulates three processes namely Ta'lim (transmission of knowledge), Tarbiyah (human development), and Ta'dib (ethics and values); which are interrelated both as a transmissive teacher-centred and a facilitative student-cantered approach.

Keywords: *Diversity, Inclusion, Student-centered, Model of Practice*

(NEET) Young People and their 'Transitions' to Adulthood

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Abstract

Since adolescence was 'discovered' in the 20th Century there has been a fascination with how young people transition to 'become' adults. This 'discovery' of adolescence made by psychiatrists, highlights the influential roles that experts have in producing categories and concepts. These categories and concepts govern lives beyond central governing and through dominant knowledges produced by dominant groups.

Using a poststructural approach to governmental document analysis I problematise the dominant knowledges that underpin how young people are produced as 'transitional'. I analyse 14 government documents and examine the dominant discourses throughout them. Using Carol Bacchis 'Whats the problem represented to be?' approach this preliminary data analysis highlights some dominant patterns of thinking about young people as a population.

The knowledges of human development and human capital theory are evidently present and shape the way that (NEET) young people are produced within these documents: as lacking certain capabilities and as economic future liabilities.

I argue (drawing of Foucault) that dominant discourses of psychology and economics construct and govern (NEET) young people as a population by producing them as specific forms of problem representations. These representations create (NEET) young people as lacking capabilities and position them as future economic liabilities. Both of these representations produce (NEET) young people who are in a state of problematic transition to adulthood.

Keywords: F*oucault, youth, policy, transition, problem*

"Work Active" – Embracing the Tertiary Learning Needs of Adults with Intellectual Disability – The "Forgotten Learners"

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Abstract

The object of the Work Active pilot was to develop a practice framework for an internship-based employment training programme for people with an intellectual disability, utilising a participatory action research methodology. The intention was to develop a learning programme that combines a classroom component with workplace experience (in the form of an internship). Importantly, this project sets out to develop a teaching and learning model and resource based on a collaborative approach that maximises the potential for sustainable employment outcomes for people with an intellectual disability. The "Work Active" approach is characterised by a collaboration between the learner, a tertiary education institution, an employer and an NGO disability service provider, each with distinctive but complementary roles.

This presentation will focus on a key finding relating to the development and delivery of the classroom-based work. This includes the importance of reflection, sharing work experiences, together with providing feedback in group discussion and activities. Central to this was a collaborative approach with input from learners, employers, teaching staff and support staff. The classroom-based materials and activities of the Work Active learning programme are based on an experiential learning approach. The facilitated approach to learning enables a more personalised approach to teaching and learning, by ensuring there are a range of options and opportunities for people to reflect on and talk about their experiences. Experiential based learning plays an important role in ensuring meaningful and effective teaching and learning opportunities for learners with an intellectual disability.

Keywords: *Intellectual disability,Experiential learning,Collaboration*

Designing a Community Support System

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Abstract

Stopping Violence Dunedin (SVD) is a not-for-profit organisation run by experienced facilitators who instead of placing blame on their clients, work to empower them with a sense of community and positive self-worth. The men who attend weekly group sessions build strong connections, sharing their story and listen to others with similar life events. This sense of community with other men who share similar experiences is vital in developing hope and changing the trajectory of their lives.

In a conversation about men who drop out of the programme, the manager of SVD expressed an interest in seeing if the support system could be extended to the men in some way during the week, when they are away from SVD. She had found in her own research that participants discover that being part of a like-minded community gives the men something powerful to hold onto during the week. "They could feel the support of the group as they navigated their worlds" (Boreham, 2018, p.14).

My Masters of Design focused on an investigation of the processes at SVD and the journey of change that men experience in order to create a design outcome that supported this work. This inquiry used the Double Diamond methodology where a discover, define, develop and deliver approach ensures that people and community are the centre of a design process. This talk will focus on the Discover phase where research of perpetrators of domestic violence and their narratives of change alongside interviews with the SVD facilitators, highlighted the importance of community

Keywords: *Communication Design, Double Diamond Methodology, Community, Domestic Violence*

Nurturing a New Doctorate of Professional Practice – Voices from Three Academic Mentors

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Abstract

Quality supervision is widely recognised as being key to the success of postgraduate learning. In Professional Practice, however, the relationship is one of mentoring where the mentoring relationship recognises learner expertise and agency. In Otago Polytechnic's Doctor of Professional Practice (DProfPrac), learners work on practice-led research that is transformative for themselves, their professional framework of practice, and their work context - be it organisation, profession, community or environment - and are supported by Academic Mentors.

In this paper, the three authors reflect on the first four years of mentoring the DProfPrac with a view to identifying key lessons in strong mentoring relationships. Using a multi-vocal reflective approach, we start with our narratives of the lived experiences of mentoring and then together explore themes to articulate an understanding of mentoring and its affordances and features. We describe the challenge of providing rigour when the qualification is systemically and qualitatively distinct from all of our experiences and that of the institution. We consider the distinctness of the doctorate and the concept of mentoring in the light of our reverence to Tino rangatiratanga (sovereignty) and Aotearoa's bicultural framework. We unpack the premise of self-determination expressed in both creative approaches to research work and in the transdisciplinary nature of learners' contexts. Identifying a range of tensions inherent in the degree and the mentoring required, we explore our experiences and reflections to unpack features of both mentoring in teams and of the role of mentorly communities of practice

Keywords: *supervision, doctorate, professional practice, reflection, learner-determined*

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Facilitating Learner Success in Professional Practice Qualifications: The Critical Role of the Academic Mentor

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Abstract

Professional practice post-graduate learners are different from those undertaking traditional masters or doctoral degrees. They are work based learners - practitioners who are interested in improving their practice. They are required to be independent learners but are not steeped in the rigour of the academic researcher, yet they must undertake a rigorous practice enquiry and make a worthy contribution to their practice area. For them, successful outcomes often flow from a successful relationship with their academic mentor - their facilitator.

This presentation will examine a research-based model for mentoring which underscores the critical role of the mentor in ensuring a powerful learning experience. The mentor and learner travel together on a journey which facilitates the discovery and development of reflection, self-awareness, and skills for lifelong learning. The model is underpinned by four elements at the centre of the mentoring process: "fit", relationship, skills knowledge and attitudes, learners first. These elements are reported as key aspects contributing to successful completion of the learning process.

The presentation will also examine mentoring as a professional teaching role, not merely a technical process. Our experience is that it is easy for mentors to get it wrong for a particular learner, so mentors must exercise judgment and understand that mentoring is a relational role that requires empathy and an understanding of the learner. Mentors operate in the best interests of their learners, i.e. they get to know them, and they matter.

Keywords: *facilitation, transformation, relationship, success, work-based learning*

Mapping the Southbase Competency Framework to Credit Requirements in the New Zealand Diploma in Construction Management

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Abstract

Recognition of prior learning is a process to recognise learner's experience by assessment against the graduate profile. Learners will be enrolled on facilitated courses that assist them to prepare a written and oral presentation supported by a portfolio of evidence which demonstrates and documents their integrated knowledge and understanding. A rationale will be presented stating how their work has been.

Aim: To provide a map of the Southbase competency framework to credit requirements against the NZ Dip Construction (Construction Management), Level 6. To further provide evidence requirements that will allow Ara to award credit towards the New Zealand Diploma in Construction Management with a pathway for employees to complete full diploma.

Methodology: Working on a project offered by Southbase to research Ara skill and competency profile for Southbase – one of the largest construction companies in NZ. Our team performs analysis enabling us to identify gaps the Ara construction programme and industry competencies. The outcome will critically reflect Ara's skills and competency profile and to help Southbase develop its own competency and training programme.

Keywords: *Competency, Construction, Mapping, Industry*

Online Learning in the Master of Applied Management

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Abstract

Research aim

Evaluate how compulsory papers in the Master of Applied Management (MAM) supported online learners to develop knowledge and skills to successfully prepare for supervised research papers. This process-outcome, impact evaluation (Owen, 2007) of outcomes of Level 8 compulsory papers in the Master of Applied Management, focuses on learner experience and achievement and examines implementation characteristics of the papers (such as delivery mode, facilitation, timing) and learner perceptions of their engagement experience.

Research design/methodology

This interpretivist, inductive, evaluative research uses questionnaires and interviews in a mixed methodological study. Questionnaire – random sample of all past learners who have completed at least two compulsory papers from 2017-2021 (approximately 100). Interviews – purposively selected sample based on responses by questionnaire respondents (up to twenty interviews each being 20-30 minutes). Data analysis will be statistical and thematic.

Ethics approval for the research

Approved by SIT Human Research Ethics Committee 22nd June 2021.

Findings

Data collection in July and August.

Analysis and findings will be written up in September.

Implications for our teaching, industry and/or communities

The research will:

• propose strategies for improving learner support (such as facilitator contact, discussion board value, and assessment feedback).

• benefit facilitators to validate current practice and improve future learner engagement.

• present outcomes of contemporary evaluation research on online learner perceptions.

Keywords: *impact evaluation, learner perceptions, online learning*

Further Perspectives on the Framework of Developmental Practice for Vocational and Professional Roles Produced from PhD Findings

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Abstract

The framework of developmental practice produced from PhD findings by Harrison (2019) comprises a combination of cyclical and iterative processes that reflect well known models of problem solving from Deming,(Moen & Norman, 2010); action research from Lewin,(Adelman, 1993); and experiential learning ranging from Dewey, (Miettinen, 2000), Kolb (1984) and Engeström and Sannino (2010), that underpin the growth of vocational and professional practice in contemporary landscapes of practice identified by Wenger-Trayner (2015).

This paper discusses further perspectives that support its adoption in contemporary academic and training programmes. These include the automatic alignment of theory and practice and their integration in a coherent outcome; the means to adjust and improve outcomes through iteration; the ability to reflect and share progress with fellow students and tutors; and the development of personal confidence and motivation from conscious achievement of personal progression and emergent competence.

Overall, the framework of developmental practice is a quality process, that links a personal aim with a direction and coherent actions to achieve a desired outcome. It fosters engagement, increasing self-awareness, and confidence to build independent future practice and growth in a set of careers.

Keywords: *vocational and professional development, developmental framework, skills; competence, capability*

The Experience of Critical Thinking for Students Within the School of Computing SIT

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Abstract

This research explores the nature of the relationship among the prevalence of critical thinking references within curriculum documentation, interpretation of these by teachers, and the experience of critical thinking for students within the School of Computing. The first phase of this research involved an initial document analysis of postgraduate information technology curriculum documents for explicit and implicit references to critical thinking and related terms and phrases. Qualitative data collection and analysis were employed. The frequency of such terms was explored, their presence in course learning outcomes and assessments was counted and categorised. The high proportion of explicit references to critique and critical analysis was evident across all courses. Thus, the importance of developing critical thinking in postgraduate students is crucial to the teaching staff as they navigate the course descriptors in their subject areas issuing and marking assessments. An increasingly important field within information technology is artificial intelligence. Such technologies utilize algorithms to quantify patterns in numerical, visual, audio, or textual data. The outputs from artificial intelligence algorithms are strongly influenced by their underlying design assumptions and biases. The implications for academics include modelling critical thinking to students by questioning assumptions underlying artificial intelligence algorithms and promoting thinking about technology from alternative perspectives. Such assumptions frequently incur bias towards certain demographics and ethnicities, especially in the application of facial detection algorithms. Implicit objectivity of algorithmic results is often assumed by users of artificial intelligence and thus needs to be critiqued with the skills and dispositions of critical thinking.

Keywords: *Artificial Intelligence, Critical Thinking, Algorithm*

What Learner Capabilities Contribute to Graduates' Work Readiness?

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Abstract

Research aim: The Learner Capability Framework (LCF) is a matrix of 25 capabilities or transferable skills, e.g., the ability to effectively communicate. While all capabilities contribute to learner success and employability, the research aim was to identify those most important for graduates' work readiness.

Research method: The project was conducted using an action research methodology over two years by a research team at Otago Polytechnic (OP) Dunedin Campus. It received OP ethics approval and a Ako National research grant.

Data Collection: Trained staff researchers (N=51) visited or phoned 163 employers and stakeholders representing 15 industry sectors (e.g., Sports, Fashion). Interviewees were shown 25 laminated cards (each representing a LCF capability) and invited to rank the top 10 capabilities for their respective workplace. To validate and prioritise capabilities from the graduate's perspective, data was collected via an online survey and phone interviews from OP alumni (N=389) and the local employers' association members (N=14). To gain a Kaupapa Māori perspective, staff (N=17) from the Te Arai Uru Kokiri Training Centre were interviewed.

Results: The top ranked capability for successful graduate entry into the workplace was 'communicates effectively verbally'. This was closely followed by 'displays effective interpersonal behaviour, works in teams, solves problems, works independently, communicates effectively in writing, organises effectively, and demonstrates resilience'. There was no evidence that the capabilities differed substantially from a Kaupapa Māori perspective.

Implications: For educators, findings emphasise the importance of developing curricula, teaching and learning methods focusing on verbal communication skills, interpersonal behaviour, and teamwork. For learners, findings highlight the importance of providing prospective employers with evidence of these capabilities.

Keywords: *Learner capabilities, behavioural competencies, graduate work readiness*

Integrating Learner Capabilities (transferable skills) and EduBits (micro credentials) into Year 3 Bachelor of Nursing

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Abstract

During this presentation I will be sharing how we have integrated Learner Capabilities (transferable skills) and EduBits (micro credentials) into our Year 3 Bachelor of Nursing community project where their focus is to become Community Development Practitioners. The students have been working towards other learner capabilities (transferable skills) during the past two years of their study and are using these to help with future employment, as well as towards their nursing registration.
Integrating Assessment – Learner Capabilities - EduBits
We have developed a mega-credential package where the students complete their community project in small groups as part of their assessment for their 700-level course as part of their Bachelor of Nursing. Through this work they are automatically awarded EduBits for Learner Capabilities and also the UNESCO Sustainable Development Goal/s that they were focusing on. For our learners it is showing them that not only does their project make a difference in the health sphere, but it is also setting them up for success in whatever career they decide to work in as these are transferable skills.

The students use a problem-solving cycle and focus on the particular capabilities of:

- Thinking Critically - Kia hōhonu kā whakairo

- Practices Ethically - Kia matatika kā mahi

- Participates in Behaviour Change - Kia panoni whanoka

- Performs Community Service - Kia hāpai i te hāpori

Solves Problems - Kia whakatika i kā raruraru.

Keywords: *transferable skills, nursing, microcredentials, community practitioner*

The Expectations and Perceptions of Younger (25 yrs or under) Business Students at a Higher Education Institution in New Zealand

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Abstract

This presentation will begin with a clear identification of the research questions and the reasons behind the research project.

Research Questions

What are the current younger (25 yrs or under, Gen Z) students' expectations and perceptions of higher level business education at SIT?

What potential changes are needed to the management, course content and teaching delivery methods to better meet the expectations of current younger and future students in higher level business education courses?

Research Methodology and Findings

The research methodology will be clearly outlined and explained with discussion of the key findings from two completed questionnaires. The first questionnaire was developed to identify the initial expectations about their impending tertiary study of year 1 business students at the beginning of their study, this was distributed in February 2021. The second questionnaire was designed to identify the perceptions of this same group of first year business students once they had completed their first semester of study, this questionnaire was conducted in July 2021. Follow-up interviews to provide deeper exploration of areas of interest will be conducted in semester 2 2021 and initial results from these will be covered. An overview of ethical issues, a clear rationale for the sampling and research methodology will be provided along with an overview of challenges the project has faced to date.

The implications of the findings for experienced educators will be discussed, identifying areas for our business department and probably many other tertiary education institutions and departments to become more in touch with the needs and expectations of our youngest groups of students.

Keywords: *Expectations, Perceptions, Younger Tertiary Students*

Weaving of Your Personal Self and Professional Self

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Abstract

The Master of Professional Practice (MProfPrac) at Otago Polytechnic is an 18-month programme which is designed to enable learners to transform, innovate or challenge real practice in their workplace or the wider industry. Reflection is a core component of this programme. The concept of learning from reflective practice is supported by scholars such as, Helyer (2015), Moon (2005), and Schön (1983).

As part of their final report, learners complete a critical self-reflection of their MProfPrac journey. Anecdotally, these reflections suggest a richness of information as it relates to the influence of the learning gained from the reflective process, on them as professional practitioners. However, this understanding has yet to be formalised. Once ethics approval was received, the authors interviewed seventeen MProfPrac alumni. Interviews, focused on the critical reflective process, were carried out either via face-to-face, phone, or skype. Interviews were recorded, transcribed verbatim then analysed for emerging themes.

Two key themes emerged on the value of the self-reflective process. They were the influence on both the personal self and the professional self. Some participants espoused the benefits to both, others made the point that the two cannot be thought of in silos as your professional self and personal self are intricately weaved together.

The findings help us to appreciate the pivotal role of reflection in the learning process. Furthermore, this reinforces the value of developing reflection as normal practice, but to do that, we must bring our whole self to the process.

Keywords: *Practitioner Research, Reflective Practice, Learning*

A Model of Work-Based Learning for the IT Industry

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Abstract

With the ongoing border restrictions, there is a huge shortage of IT skills in New Zealand. While work-based learning has been regarded as an effective approach to address skills gap in many disciplines, it is usually not an established practice in the IT industry. We have developed a model of work-based learning that can play a vital role in ramping up critical IT skills for learners in educational institutes as well as for people in the industry who want to upskill themselves to grasp the tremendous job opportunities in the IT industry. Our model integrates real world IT scenarios, industry best practices/certification and industry-like team working environment into the curriculum. We have practiced this model for our Operations and Security pathway students over a year and have aligned courses around this model. This works as a better alternative to industry internship/attachments as the learners get personalized tutorials/help from the instructors while they solve real world problems using tools/software which are widely used in the industry (e.g AWS/Azure cloud). We have partnered with some of the leading technology companies like Microsoft, Amazon, Fortinet and Computer Concepts Ltd. Students not only learn how to securely design IT infrastructure using state-of-the art tools but also learns how to build such tools using open-source software. In this talk, I will present research on work-based learning models and illustrate how our model fits in that space. An outline of our operations and security pathway will also be presented.

Keywords: *security, work-based learning, cloud*

Soft Skills as an Aid to Employability in Accounting

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Abstract

Across 2020 and 2021 two students in the Bachelor of Applied Management completed research projects investigating the soft skills required by accounting graduates to enhance their employability. Each student conducted several interviews of recruitment partners in Chartered Accounting firms in the Canterbury region.

This presentation presents an overview of their findings and a reflection on (a) how the use of research projects like this can enhance relationships between education providers and industry and help build the industry networks of students and (b) how this form of capstone project provides a valid industry based experience for final year students in an undergraduate degree.

These findings are not limited to soft skills and are not limited to accounting or business graduates, and have relevance to a wide range of skill sets and professions across Aotearoa New Zealand.

Keywords: S*oft Skills, Graduate Employability, Capstone Projects*

A Case Study of a New Zealand College's Centenary Celebrations

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Abstract

Special events reflect the character of a school, yet they are largely reliant on fundraising and volunteers to stage them. These events pose a financial risk so prudent governance of investments, time, and dedicated resources are critical. Two facilitators from the Southern Institute of Technology (SIT) undertook a case study of a New Zealand college's centenary celebrations to gain insights into its planning plus develop valuable, teachable, elements of the process.

Three areas are focused on: resources utilised, including the contribution from volunteers; paid staff and stakeholders; the role of an online presence and social media; and downstream benefits. All three provided current, applicable, data and information which can transfer into similar case studies or other classroom-based activities. Primary data was collected from 12 semi-structured interviews (SSI) with staff and committee members after the event (interpretivism) then an inductive approach identified emerging themes and theories. Ethics approval was granted from the SIT ethics committee.

Findings from the case study showed that sponsorship, partnerships, compliance, and suppliers to the event should all be managed by an experienced professional. Social media as the primary communication medium worked well, but channels which transcended generations were also important. The college benefited from profile raising, an enhanced reputation, and a blueprint for future events. Existing literature, plus these findings, demonstrate that such an event is a large and complex undertaking which requires substantial support from the school in conjunction with an appropriately sized group of enthusiastic, capable volunteers.

Keywords: *Case study, event planning, volunteers, school, self-funded*

Symposium Session Stream: *Tourism*

The following section contains published abstracts from the OPSITARA 2021 Research Symposium sessions relating to the theme of Tourism.

Skills and Training in the Hotel Sector

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Abstract

Hotels cannot provide excellent service without the help of great hospitality professionals. Hospitality is not simply the provision of service alone, but an experience that is specifically curated and delivered in a meaningful way for the attending guests by the hotel employees. One aspect that remains constant are the skills and quality of staff are among some of the most important factors that underpin the competitive success of a hotel (Baum & Devine, 2007; Vallen& Vallen, 2009). The original purpose of the research was to develop a picture of the skills profiles, work background, educational attainment, attitudes and plans of front office staff in Qualmark 4 and 5 star rated hotels in New Zealand. The study findings demonstrated the perception of front office work within New Zealand is relatively well perceived and the skill set required is vital to the overall hotel operation. The findings' also highlighted employees were keen to pursue future development and career progression within the industry. However, the Covid-19 pandemic has severely impacted the sector's professional growth and evolution, especially with so many of New Zealand's hotels being used as managed isolation and quarantine (MIQ) facilities. The concern now is that the pandemic is limiting the potential for starting a career for new hospitality graduates or those in the early stage of their career path. This raises the question of whether hospitality professionals should be diverting their focus into alternative industries or take the opportunity to look to the future of the skills and training that will be required in the future.

Keywords: *Hotel, skills and training, Covid-19, service*

Tourism: What is the Future for New Zealand?

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Abstract

Prior to the COVID19 pandemic, tourism was a significant contributor to the New Zealand (NZ) economy. Tourism Industry Aotearoa (2021) report "total annual tourism expenditure as $41.9 billion to February 2020". With the advent of the pandemic, NZ closed its borders to international travellers and halted tourism related domestic travel for a significant period. The implications of the pandemic is said to be having a resounding effect on the tourism industry, particularly tourism operators. Operators have been forced to put their businesses on hold or have completely closed – resulting in restructuring and redundancies. While the NZ government has provided financial support to tourism operators during the continued border closures, these closures are a cause for concern for the industry as a whole. Annual international visitor numbers have grown significantly in the last five years with close to 4 million arrivals in the country due to the role played by regional tourism operators in hot spots like Milford Sound and Queenstown. The higher numbers also meant higher monetary rewards for the operators – conventionally, due to their reliance on tendencies to charge higher prices for tourism related products.

In response to the surge in international tourists, the Commissioner for the Environment and environmental bodies have highlighted the need to limit tourism numbers once the borders reopen. The Minister for Tourism, Stuart Nash, has also echoed the voice to reset tourism business models, operators pricing strategies in regional areas, their heavy reliance on the international tourist, to become financially and environmentally sustainable and affordable for domestic tourism (The Beehive,2020).

This study proposes to investigate the effects of mass tourism on NZ environment in general and particularly tourism operators' attitudes in response to the calls for capping tourists' numbers, resetting their business models, and pricing strategies. It is believed that this investigation will inform the NZ policy makers in response to the calls for renewed and sustainable business models.

Keywords: *Mass tourism, tourism industry, sustainable, business models, pricing strategies*

Perceptions of Destination Image in Tourism Choices

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Abstract

Tourism scholars have long recognised the importance of understanding resident and tourist perspectives of destination image, as well as the critical role that these two groups can perform in promoting and recommending specific destination choices to others. This study examined resident perspectives and, in the COVID-related absence of tourists 'on the ground', non-resident perspectives of the destination image of the city of Ōtautahi/Christchurch, New Zealand. Within this broad banner of destination image, particular attention was focussed on individuals' willingness to recommend this destination to others, as this is a significant indicator of behavioural intent which attempts to span the attitude–action gap. This study utilised a destination image questionnaire developed and tested by Stylidis et al (2017), which was distributed via a convenience-based snowball sampling approach using two prominent social media platforms: Facebook, and LinkedIn. Data collection occurred online between August–December 2020. The questionnaire measured the cognitive, affective, and overall image of Ōtautahi/ Christchurch and place attachment. Total of 215 responses were generated, of these,166 questionnaires were identified as valid responses and subjected to descriptive analyses. Research findings indicate residents and non-residents (i.e., potential tourists) share similar perspectives of destination image, with non-residents reporting a slightly higher (i.e., 'better') perceived image of Ōtautahi/Christchurch, New Zealand. Overall, both groups indicated a similar level of willingness to recommend Ōtautahi/Christchurch to future visitors. This study sheds light on a perceived image that potential tourists and residents could hold during an 'unusual' time (i.e., COVID-19). It also discusses lessons learned by conducting surveys online using social media platforms during atypical times.

Keywords: *destination image, affective image, cognitive image, COVID-19, Ōtautahi/Christchurch*

Relative Competitive Positions of Ethnic Restaurants: A Case of Indian Restaurants in Christchurch

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Abstract

Online reviews of restaurant quality and experience play an important role in the decision-making of potential future customers. The 'independent' quality assurance role performed by online review platforms is important for a range of potential customers, most of whom are likely to be residents. In tourist destination areas, however, this role is often amplified via the cultural unfamiliarity of visitors with host cuisine and quality standards in restaurant settings. Moreover, online review platforms are used both extensively and increasingly as a mechanism by which to not only influence purchasing behaviour but also infer emergent or confirm extant brand awareness. Residents and tourists can evaluate a business and its service dimension using different attributes identified in these online reviews. Thus, it is necessary to understand the importance that customers assign to the service dimensions/attributes of these restaurants and the perceived performances of these service dimensions/attributes in the eyes of customers through these reviews. Drawing from the 'Importance Performance Analysis' approach this study proposes to analyse online reviews given to ethnic restaurants located in Christchurch city in New Zealand. Reviews given to all the identifiable ethnic Indian restaurants located in Christchurch city during the last three years will be retrieved and important attributes of service of these restaurants will be extracted by applying the Latent Dirichlet Allocation (LDA) machine learning approach. Improved One-Vs-One strategy-based Support Vector Machine (IOVO-SVM) and Ensemble Neural Network-based model (ENNM) will respectively be used to assess the performance and importance of the identified attributes of the service dimensions of these restaurants. Findings will be applied to construct Importance Performance plots. These plots will be utilised to suggest recommendations for these restaurants and destination marketing managers.

Keywords: *Online reviews, LDA, Ensemble Neural Network, Importance Performance Analysis, Ethnic Restaurants*