WILNZ

Work-Integrated Learning New Zealand

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UNIVERSITY OF NEW ZEALAND

Andrew Martin (Massey University), Angela Beaton (Te Pūkenga), Jenny Fleming (Auckland University of Technology) and Karsten Zegwaard (University of Waikato).

Background: The Ministry of Education and Tertiary Education Commission (TEC) have embarked on a series of reviews and recommendations on the future of tertiary education in Aotearoa. In 2019, the TEC released a discussion document on future education, including embedding Work-Integrated Learning (WIL) into curriculum to enhance graduate employability outcomes.[1] More generally, the Reform of Vocational Education (RoVE), and its seven key changes, is creating a strong, unified, sustainable vocational education system that is fit for the future of work and delivers the skills that learners, employers and communities need to thrive.

Issues or Unique features: This panel presentation will focus on recent tertiary WIL developments, nationally and internationally, including:

1. The WIL Strategic Framework: Universities New Zealand (UNZ) WIL Working Group
2. RoVE and implications for WIL: Te Pūkenga
3. WILNZ strategic direction 2020-2023
4. The Global Charter for Cooperative and Work-Integrated Education: World Association of Cooperative Education (WACE)
5. The International Journal of WIL (IJWIL): supported by WILNZ.

Discussion/Argument: The presentation discusses recent strategic tertiary education legislative changes, directions, and approaches to support, promote, and improve student learning and employment outcomes and achieve WIL best practice. It will discuss drivers of change and further explore how the scope and scale of WIL is changing within Aotearoa. International initiatives that support this direction will also be highlighted.

Implications/relevance for others in WIL: The initiatives outlined above aim to initiate further discussion regarding best practice and the scaling of WIL, including but not limited to curriculum initiatives and the development of tertiary learning environments in which the practice of WIL can continue to grow and improve for the benefit of learners.

[1] https://conversation.education.govt.nz/conversations/shaping-a-stronger-education-system-for-all/

Developing institutional-wide practice of work-integrated learning.

Sandy Muller (University of Waikato), Karsten Zegwaard (University of Waikato) and Hayley Ferrier-Kerr (University of Waikato).

Background/Introduction: In 2014, the University of Waikato commenced a major restructure of the undergraduate curriculum. The restructure resulted in significant changes to all undergraduate degrees and included the introduction of compulsory work-integrated learning (WIL) for all students. The University of Waikato has classified WIL into two broad forms; work placements and work-related projects (mostly campus-based activities with an external client).

This presentation will discuss the development of WIL at the University of Waikato, some challenges encountered, the internal structure and resources to support WIL, and the diverse range of WIL types that are offered.

Unique features of the practice: The University of Waikato is the first, and to date the only, NZ university to make WIL compulsory for all undergraduate students. The curricular change took effect for all students first enrolled in 2017, however, as most students will complete their WIL paper/course in their 3rd year of study, the full effect of compulsory WIL will be realised in 2020.

Literature: Many universities are expanding their WIL offerings, with Australia reporting that in 2017 there were 555,403 WIL experiences (Universities Australia, 2019a) within a cohort of 1.5 million tertiary education students (Universities Australia, 2019b). Even though there are a few universities that have made WIL compulsory, for example University of Cincinnati which now reports 30,000 students completing WIL every year (Cedercreutz et al., 2017), many universities have instead opted to set high participation targets (e.g., Macquarie University, RMIT Australia).

Discussion: With the announcement of the new curriculum, an enquiry of current practice of WIL was undertaken to determine examples of good practice and identify areas that will require additional support. The university formed a Central WIL Unit to support the WIL groups/staff in each of the Divisions/Schools across the university. The university also invested into a software platform (SONIA) to improve efficiency of WIL activity processes and streamline the user experience for students, staff, and partner organisations. The SONIA platform also enable better reporting of WIL activities and completions.

Implications of the practice for the WIL community:

As WIL continues to expand in NZ, the experiences from the University of Waikato will be of interest to WIL practitioners and leaders at other NZ universities.

Academic-Graduate Dialogue for building trusted work-integrated learning relationships.

Kim Burley (University of South Australia).

Introduction: Work-Integrated Learning (WIL) research has highlighted the need for strong partnerships between universities and industry. Through a focus on a dialogic communication lens this paper reports on research that sought to understand the role of representative academics in achieving this goal. In particular it focusses on one finding: that is, how graduates help these WIL academics to build and nurture trusted and valued partnerships between institutions and host organisations.

Literature: Key literature concerning relationships and academics in WIL falls into three related themes; employer engagement and the need for WIL practitioners to engage in professional development around it (Zegwaard et al. 2019), the vital role that university WIL practitioners undertake as boundary spanners (Peach et al. 2011), and the unique knowledge, skills, and contexts of a WIL academic (Emslie 2011; Winchester-Seeto, Rowe & Mackaway 2016). This research complements a recent study which interviewed WIL graduates (Martin et al. 2019).

Methods: Semi-structured interviews with 15 academics across 7 Australian universities were undertaken informed by Dervin's methods of Micro-Moment Time-Line Interviews Methodology (Dervin & Naumer, 2009). A dialogic communication (Kent & Taylor 2002) and sense-making (Weick 2001) theoretical lens is taken.

Results: Graduates formed a trusted pool of contacts; facilitating introductions to potential workplace supervisors, also being reliable workplace supervisors themselves. Graduates advocated on behalf of the institutions when initiating projects, study tours or offshore initiatives acting as boundary spanners themselves. Mutual trust between academics and graduates had already formed through a student/teacher relationship and was further reinforced by mutual respect of each party's industry and academic standing. Graduates respecting the aims of the WIL strategies also contributed to the trust engendered.

Conclusions: When communication is viewed as a means to promulgate a complex system, it is clear why relationships with graduates as a product of this system are sought out by WIL academics. Engagement is stronger when pre-existing relationships are built on trust and respect. Findings also demonstrate that the WIL academics' job satisfaction and sense of professional identity are improved through this cycle of engagement with this vital cohort of boundary spanners.

On-campus Collaborations and Innovative WIL Practice .

Suzette Dyer (University of Waikato), Heather Lowery-Kappes (University of Waikato) and Fiona Hurd (Auckland University of Technology).

We are increasingly challenged to incorporate work-integrated learning through external engagement to provide an authentic practical learning experience for our students. At times, engaging with external organisations seems the preferred way to embed authenticity within the seemingly detached classroom context. As careers practitioners and academics, we want to bring the theory and practice of career management and development to life for our HRM students. Indeed, our assumption is that career planning, managing and developing is an interactive, continuous process and that Human Resource Management Practitioners are responsible for this process within their wider work role

The previous focus of engagement with industry looked to external presenters to provide expertise in career management. However, we identified the external presenters approach left a gap in our HRM students learning leaving with little real world understanding of what it means to manage their own or someone else's career in practice. In order to address this gap, we looked to the careers experts already working within the University. In 2015, the Management School and the Career Development Services collaboratively redesigned the course. The course was redesigned around experiential learning that included engaging with the on-campus Career Development Services.

This presentation will focus on initial analysis of the 106 student-participant reflections on their engagement with the career practitioner. The analysis shows how students began to deepen their understanding of career beyond the boundaries of a job. In particular, students began to incorporate consideration for family and wider life obligations in their understanding of their future career planning and the necessity of managing their employment in order to meet personal, employment and family needs.

Our collaboration and engagement with on-campus careers expertise has resulted in an enhanced curriculum design that has been crucial to facilitating an authentic learning experience for our students. Therefore, our collaboration raises a number of questions as this relates to defining who has appropriate expertise to integrate in to learning and where to find them. Our work also draws attention to thinking about how we can engage our internal on-campus experts more fruitfully within curriculum design. It is these, and many other questions that we explore in this presentation.

Women Navigating WIL Placements in Aotearoa New Zealand (NZ): Female Practitioners Speak Out.

Sally Rae (Auckland University of Technology), Dr Irene Ryan (Auckland University of Technology) and Prof. Dame Marilyn Waring (Auckland University of Technology)

Background/Context: Research from sport management programmes based in the USA suggests that Work Integrated Learning (WIL) placements are particularly beneficial to sport management female students.

Organisations in the NZ sport industry are numerous and varied, including government sport agencies, public benefit entities (not-for-profit) and for-profit sport businesses. Fortunately for NZ sport management tertiary WIL students there is an abundance of sport management WIL roles that can offer unique learning opportunities. However, this may not always be the case; in some instances, students can find themselves doing menial, repetitive tasks that do little to enhance their learning (e.g. reception, data input).

Aims: The purpose of this presentation is to reflect on the experiences and meanings seasoned women practitioners who hold management roles in the NZ sport sector made of WIL. Especially, how can universities better facilitate female student's WIL decision-making process? This presentation, drawn from a much wider doctoral study, will highlight the various views held by twelve women practitioners who either underwent their own work-integrated learning as part of their university study programme and/or have provided WIL placements for students as part of the student's tertiary sport management studies. There is a lack of research that addresses how students make strategic WIL placements choices in sport management and how tertiary institutions can better prepare female students going into male-dominated industries such as sport management.

Methods: The wider doctoral research used a feminist hermeneutic methodology. Semi-structured interviews with 12 female practitioners was one of the data collection methods. Hermeneutic thematic analysis was used to weave the participants stories, academic theory and the researcher's personal experience to develop an extended understanding or according to Gadamer, a merging of the horizons.

Results: One key finding was that female students when selecting a WIL sports organisation need to be more strategic in their choice to maximise their learning opportunities. On reflection, what was also evident to the researcher was that the practitioners appeared to overlook how the practitioners own tertiary WIL placement had enhanced their soft skills which had proven equally beneficial and necessary to their career progression in the industry.

Implications for WIL Educators: We need to have more conversations with female students about the realities of working in a male-dominated sector and how to navigate the taken-for-granted, gendered norms,

Most female students do recognize the importance of the WIL placement but they lack insight into what skill sets and experience they need to develop to maximise their career potential. Tertiary providers need to ensure female students are well prepared ahead of time to assert their expectations while on a WIL placement.

Keynote speaker for WILNZ conference

Key note speaker for Conference 2021: Denise Jackson

Denise Jackson is an Associate Professor and the Director of Work-integrated Learning (WIL) in the School of Business and Law at Edith Cowan University, Western Australia.

Denise has received a number of research and teaching and learning awards, most recently a national Citation for Outstanding Contribution to Student Learning. She sits on the National Board and is the State Chair Western Australia for the Australian Collaborative Education Network, the professional association for WIL in Australia.

She has researched and published extensively in the areas of WIL, graduate employment and underemployment, transition from university to the workplace, career self-management, and professional identity development. Denise has facilitated in Human Resource Management, WIL and in dedicated employability programs in the tertiary sector for a number of years, both in Australia and the UK. Prior to this, she worked in Human Resources in the UK financial and manufacturing sectors before establishing her own business in the tourism industry in Southern Africa.

Digital ethics and portfolios.

Kristina Hoeppner (Catalyst)

Portfolios are created increasingly electronically, be that portfolios for internships, work placements, or other WIL activities, and also showcases. Especially when portfolios are made available publicly, students and lecturers need to be aware of the implications and consider digital ethics. This comes in the form of copyright, protection of personal information, security, and accessibility to name but a few.

In this presentation I will introduce the topic of digital ethics in portfolio creation to the audience as investigated and researched by the AAEEBL (Association for Authentic, Experiential, and Evidence-Based Learning) Digital Ethics Task Force that was started in 2019 to look more closely into the topic and establish principles to guide learners, lecturers, and institutions in their journey online. The Task Force entered its second year in 2020 and included topics such as diversity, equity, inclusion, labor of work, professionalism, and legal matters as new principles.

Mechanical engineering students' perceptions on key graduate attributes before and after work-integrated learning.

Joseph Thomas (University of Waikato), Wendy Fox-Turnbull (University of Waikato) and Karsten Zegwaard (University of Waikato).

The engineering graduates need to have several desirable graduate attributes including strong hold on creativity, critical thinking, problem solving, communication, and team working skills to work successfully in the field. However, these attributes are often underdeveloped and do not meet employer expectations. Providing students opportunities to undertake learning within relevant workplace practice, may assist the integration of classroom-learned theories with practice-based knowledge, enhancing understanding, knowledge retention, and skill development as well as facilitate further development a range of attributes such as those mentioned. There are several approaches to learning through practice, among which Work-Integrated Learning (WIL) is an important one and thus is part of the engineering education curriculum in New Zealand.

Broadly speaking there are two types of WIL. The first, on-campus WIL (work-related projects) involves students working with external clients within the university setting. The second, off-campus WIL (work placement, internships, and practicums) involves student placement in the industry. In this research, focus is on off-campus WIL-work placement. During WIL experiences, learning combines the practice and culture of work with related theory from academic learning curricula. WIL aims to enhance the skills and knowledge in authentic settings and increase employment opportunities for students.

This mixed methods study investigates and compares engineering students' views on the importance of graduate attributes needed for a successful career in engineering, before and after placement. The students' views were collected through a mixture of qualitative interviews and quantitative surveys. Quantitative surveys gave numerical data later discussed in qualitative interviews. Additional to this, workplace observations of the students in their workplace, focused on how students apply their engineering knowledge and skills and deploy graduate attributes and skills.

This paper will a brief review of relevant literature, methodology and methods used for this research, and an insight into the early findings. Early findings suggest that participants believed that work placements enhanced both technical and non-technical skills, but overall, greater development of non-technical skills when compared to technical skills was perceived.

Graduate mechanical engineering perceptions on the value of learning from work placements and engineering projects.

Joseph Thomas (University of Waikato), Karsten Zegwaard (University of Waikato) and Wendy Fox-Turnbull (University of Waikato).

The modern workplace requires graduates with a high level of non-technical skills such as: critical thinking, problem solving, strong communication skills, and team working skills thus enabling employees to be innovative, effective, and productive in their respective fields. With greater understanding of human brain development and advances in pedagogy developments, there have also been advances in teaching and learning approaches in engineering education. Among which work-integrated learning (WIL) and problem-based learning (PBL) are two effective approaches used in university curriculum in New Zealand, where WIL relates to, for example, work placements and internships, and PBL relates to projects, seminars, assignments, course works etc.

WIL is an approach where learning is done through authentic practice in a relevant workplace environment through undertaking, for example, work placements. The integration of classroom learning with the workplace practical application helps to better understand classroom learnt knowledge and skill development in an industry-based environment. PBL is an approach where students use their previous knowledge to solve new problems through self-directed learning, analysis, and practice in solving a problem. PBL is an organized teaching methodology that involves students in learning knowledge and skills through a prolonged analysis around complex, carefully designed authentic problem, products or tasks, followed by its resolution. These approaches help students enhancing understanding, knowledge retention, and skill development, including both technical and non-technical skills.

This research study is a mixed methods study that investigates and compares engineering graduates' views on the importance of work placements and engineering projects in engineering education. The graduates' views were collected through a mixture of qualitative interviews and quantitative surveys. Quantitative surveys provided the numerical data that informed the qualitative interviews.

This paper will provide an insight of the graduate views of problem-based learning and work placements, along with the attributed they believe are important for a professional engineer. Findings suggest that participants believed that work placements enhanced both technical and non-technical skills, but overall thought that greater development of technical and non-technical skills happened in engineering projects.

Understanding and managing risk in work-integrated learning: A NZ universities perspective.

Kathryn Hay (Massey University) and Jenny Fleming (Auckland University of Technology).

Background: Risk associated with work-integrated learning (WIL) could have serious financial, reputational or legal consequences for universities, WIL staff, students or host organisations. Research in Australian and Canadian universities (Cameron & Klopper, 2015; Cameron, Dodds & McLean, 2019), highlights the need for a clear understanding of risk. However, literature specific to understanding risks associated with WIL in New Zealand is minimal, with no previous empirical research located.

Aim: The research explored what WIL staff understood about risk for universities, students and host organisation and how risks were mitigated or managed.

Methods: An online survey of WIL staff in New Zealand universities (n=60). Questions focused on: identifying current and emerging risks for WIL; participants understanding of different types of risk and the consequences for each stakeholder. Interviews were undertaken with 18 university staff to gain a deeper perspective, particularly the strategies for managing risks.

Results: The majority of WIL staff perceived they had a high level of understanding of risks for students, host organisations and for the university. WIL staff perceived there was very high risk associated with the conduct of students; student characteristics; conduct of the host organisation and the reputation of the university. The lowest perceived risk was associated with intellectual property; compliance with legislation; and the conduct of the university. However, over 30 percent of WIL staff surveyed had little or no understanding of strategies for managing risk, or university or host organisation policies related to risk in WIL. The interview findings identified a range of strategies that were used /could be used to manage operational, strategic and legal risks.

Discussion/Conclusions/Implications: Universities in NZ are becoming increasingly concerned with managing their exposure to risk related to WIL activities. In particular, universities need to manage student related risks as part of their duty of care. Findings of this research contribute to identifying areas where further education and resources are needed to help WIL staff understand and manage risk in WIL.

Boot Camps in Diploma of Engineering Professional Practice.

Peter Kovalsky (University of Waikato) and Karsten Zegwaard (University of Waikato).

Background/Introduction: All accredited engineering degrees require students to undertake 800 hours of relevant work experience, often actioned through two 400-hour summer work placements. As the learning requirements for engineering students are significant, the work placements are compulsory co-curricular requirements to the Bachelor of Engineering with Honours (BE(Hons)) degree.

To incorporate the work placements into the curriculum, the University of Waikato introduced the Diploma of Engineering Professional Practice (DipEPP) to sit alongside the BE degree.

This presentation will discuss the development of the DipEPP and the experience of the first cohort of students going through the DipEPP Boot Camp, a week long exercise intended to introduce the principles of management in the workplace. This was done through an active learning exercise involving participation in a start-up incubator program during the week prior to commencement of their first work placement.

Unique features of the practice: The DipEPP incorporates the compulsory engineering work placements, cross-credits two papers/course from the BE(Hons) degree, and includes two papers/course offered in the Masters of Business Management.

Literature: The literature explains that when student assessment is for credit and for full grading (rather than pass/fail), they are more engaged with the learning and generate better quality assessment items (Reddan, 2013). All NZ engineering degrees have the full credit points allocation dedicated to taught classes, causing the work placements to be either compulsory fully-assessed co-curricular activities (no credit points) or, more commonly, compulsory minimal assessment co-curricular activities (no credit points and no grade – just pass/fail).

Discussion: The introduction of the DipEPP as a parallel qualification alongside the BE(Hons) has allowed for credit bearing engineering work placements with a more comprehensive assessment structure to capture and enable learning. Presented here will be a description of the DipEPP, development of a pre-placement boot camp, analysis of the student feedback of their experiences (data collected over the summer), and insights on refining the delivery

Implications to practice for the WIL community: The DipEPP is the first of its kind at a NZ university and the findings presented here will be of direct interest to other NZ universities offering engineering and similar professional degrees where work experience is a required co-curricular (not within curriculum) activity.

Facilitating ICT Work-integrated Learning Opportunities with a Māori Iwi: Lessons Learnt.

Alvin Yeo (University of Waikato), Danny Paruru (Whakatōhea Māori Trust Board) and Annika Hinze (University of Waikato).

While most Work-integrated Learning (WIL) in the Information and Communication Technology (ICT) area involve local industry, untapped opportunities exist with Māori communities as placement partners. This paper identifies key success factors for WIL opportunities with Māori iwi by reflecting on two ICT projects involving Whakatōhea Iwi (represented by the Whakatōhea Māori Trust Board -WMTB), and University of Waikato Computer Science (CS) students and researchers.

Based in Ōpōtiki, WMTB was set up "to lift our nation, and to grow and invest in the well-being of our people". To further this goal, the Te Ihi Ka Roa programme was initiated to develop Whakatōhea's digital literacy, capability and capacity. Two WIL projects were conducted under this programme: the Marautanga Digital Library, and Waiata Mobile App Project. Following a co-design approach, a University of Waikato postgraduate student (enrolled in a CS Internship paper) successfully developed the Digital Library prototype over a 10 week period. Another undergraduate Māori student assisted with the collection of Whakatōhea's waiata and artefacts from the archives as part of an internship at WMTB .

Reflecting on the collaboration, the following critical factors were identified:

Given the short WIL time-line, critical steps such as data access and participation of stakeholders (e.g. kaumātua/elders and Whakatōhea Research and Archives Trust) should be clarified prior to the WIL project.

Before project commencement, all external partners should obtain informed consent from the iwi. WMTB also defined the focus of the work, i.e. to preserve Whakatōhea's history, heritage and taonga/treasure for future generations.

A Māori-centred approach is employed and the project driven by Māori matauranga (knowledge). Researchers and students are guests of the iwi and need to respect tikanga/traditions, goals, values and aspirations of their host. Ideally, the partners' goals and aspirations should align.

The collaboration is a long-term, equal and mutually-benefitting partnership. The collaboration brought together ICT knowledge systems and matauranga where iwi, students and researchers learnt from each other.

Rapport and whanaungatanga (relationship building) are important. Waikato and WMTB have been partners since a successful grant application in 2016.

Frequent communication by videoconferencing, emails and regular contact helps ensuring projects are on schedule and addresses any ambiguities of the project.

All partners have clearly defined roles, such as intermediary, practitioner, researcher, student and local iwi champion. The local champion connects the researchers/students to the right iwi people and facilitates access to resources.

Developing Soft Skills to produce Work-Ready International Graduate Diploma Students in Engineering: a Comparative Study.

Mohammad Al-Rawi (CEID/WINTEC), Praneel Chand (CEID/WINTEC), Jai Khanna (CEID/Wintec) and Sarla Kumari (CEID/Wintec).

Introduction: Engineering education has increased its emphasis on the development of soft skills to produce work-ready Engineers to meet the requirements of professional accrediting institutions. One key soft skill is confident public speaking. A major impediment to this is confidence with English language, particularly for EAL (English as and Additional Language) students.

New Zealand, like many countries, has an "export education" sector: many international students come to study in New Zealand as an EAL speaker. One offering for International students is the Graduate Diploma, a one year qualification for graduate international students which aims to produce work-ready engineers.

This paper investigates how performance of Graduate Diploma International (GDI) students differed across two cohorts, the 2019 and 2020 intake, in the area of oral presentation skills, when the classes were structured differently: GDI mixed with Bachelor of Engineering Technology (BET) students, and GDI students placed into a separate group from BET students.

Literature: "Soft skills", such as interpersonal communication, teamwork and professionalism are critical for success in an environment of global competition (Farr and Brazil, 2009) and for developing leadership (Robles, 2012; Development Dimensions International, 2016, as cited in Dishman, 2016). Undergraduate research projects develop soft-skills, especially communication (Carter, Ro, Alcott, and Lattuca, 2016), which can be assessed formally via oral presentations. Oral presentations can be particularly anxiety-inducing for EAL students, due to the additional impediment of speaking in a language with which they are less confident (Woodrow, 2006; Mak, 2011).

Methods: We compare the performance of GDI students across two years' cohorts: 2019 and 2020 in two oral presentations for the Final Year Project (FYP) course: the early presentation occuring in April/May, and the final presentation, in November. Due to class size and staff availability, the students in the 2020 FYP course were split into two groups, one containing all international students (GDI students) and one which contained mainly domestic students (the BET). This resulted in some "field data" on the impact of such a split. We compare the performance of the 2020 cohort of GDI students (n = 43) in their FYP presentations to the performance of the 2019 cohort of GDI students (n = 23).

Results: GDI students in the 2020 cohort on average performed better in their oral presentations at both points in the course than GDI students in the 2019 cohort.

Conclusion: Oral Communication is a key soft-skill required of work-ready engineers. The Graduate Diploma is a one year qualification that aims to produce work-ready engineers. When Graduate Diploma International students were placed into a group by themselves, they performed better in oral presentations than when placed into a class mixed with Bachelor of Engineering Technology students.

Work-Integrated Learning: Shaping employability skills for the future.

Error! Reference source not found. Diana Ayling (Unitec Institute of Technology), Denisa Hebblethwaite (Unitec Institute of Technology) and Nick Kearns (Unitec Institute of Technology).

Over the last five years the employability skills sought by business has changed. This trend will continue due to the increasing impact of automation, outsourcing and information and communication technology (ICT) in the workplace.

Work-integrated learning courses, offered in many business qualifications, play a crucial role in developing employability skills. It is in the workplace that students' practice, develop, and acquire new skills and dispositions. These learning opportunities are valued by students, employers and academics (Jackson, 2013, Patrick, 2008, Leong, 2013).

The research goal is to identify emerging employability skills required by business, government and NGOs for workplace success. The research methodology employed a systematic review of the literature on emerging business skills and New Zealand's productivity and performance requirements. Skills were identified, and categorised. Skills identified by this process were derived from current approaches to workplace collaboration grounded in agile, lean and project management practice.

When things don't go well: Challenging experiences encountered by hospitality students during internships.

Renuka Narayan (Manukau Institute of Technology) and Jenny Fleming (Auckland University of Technology).

Background: In this paper, two case studies are presented that examine 'challenging' work integrated learning (WIL) experiences, (internships), in the hospitality industry. The underlying issues that create potential risks to students, to their programme of study, to the Industry Training Provided (ITP), and to the host organisation are examined. The internships were undertaken by level 7 students enrolled in hospitality programmes at a business school of an Auckland ITP. The internships required 250 hours of work experience over 16 weeks in an organisation and during this time students also completed an industry project.

Literature review: During internships, students are exposed to real life situations to prepare them to become work ready. However, there are huge risks associated with the internships ranging from physical harm, financial loss and reputational damage (Newhook, 2013). Cameron and Klopper (2015) argue that the risks can be managed through collaboration between University lawyers, administrators and management to mitigate potential risks.

Discussion: Through examining the case studies, critical issues reported by the students during the internship ranged from long hours of work, unpaid labour, housekeeping duties due to short of staff, health and safety issues, breach of contracts and lack of understanding of the projects. On reflection, it was evident that a fully developed process for supervision of the students was needed through all elements from scoping the internship, to engagement with the host organisation, development of the project proposal, creating an appropriate methodology, through to undertaking and completing the project. In addition, components such as academic and industry preparedness of students, risk and reputation issues need to be considered. Examples of poor practice are identified and discussed, with a focus on learnings that should lead to best practice.

Implications: The paper argues for the need for a comprehensive set of guidelines and policies for students and industry for the WIL experience to help achieve the academic elements of student projects undertaken during internships by mitigating the risks from the previously mentioned challenges. The elements include the expected outcomes of the development of critical analysis and thinking skills, consideration of legal and ethical issues, and the integration of academic learning and practical, relevant work experience.

Wash, Soak, Rinse, Spin: Adaptivity and Evolution in a WIL programme.

Claire Timpany (University of Waikato), Nicholas Vanderschantz (University of Waikato) and Emmanuel Turner (University of Waikato).

Background: An internship (WIL) paper has run as part of the BCGD, now BDes, at the University of Waikato since 2004. Over the years adaptivity and evolution of the delivery model has been necessary to meet the changing needs of different stakeholders. The focus and scope of the paper has moved through several iterations from an on-campus studio that is lecturer-led, to the majority of students moving to industry placements. This paper discusses the evolution of our WIL offering and the challenges that have motivated those changes.

Issue: The paper has adapted over 15 years to the changing needs of the students, degree, community, and industry. When the WIL course began it used an in-studio model whereby groups of students worked collaboratively on not-for-profit projects supervised by academic staff. This has evolved over the years to a model where students increasingly complete the requirements for the paper at industry-based placements. The changing delivery model of the WIL component of the degree has needed to adapt and evolve as it attempts to find the optimal model that best meets the changing needs of all those involved.

Literature: Holt, Mackay & Smith (2004) found that students expect WIL programmes to provide effective professional expertise, yet the challenge for those facilitating the programme is to ensure that there is a balance between the development of technical, practical, ethical and communication skills. There are numerous models for implementing WIL programmes, these models need to be adaptable depending on their student cohort and the needs of their industry and community partners (Kay, Ferns, Russell, Smith Winchester-Seeto, 2019).

Discussion: The aim of the internship paper has always been to deliver the most effective industry-based learning to design students in a relevant context. In reality, the goal-posts are constantly changing as we attempt to prepare students for a technology-driven industry that is constantly evolving. The structure and delivery of the internship programme has therefore needed to constantly evolve and adapt as the needs of all those involved changes.

Implications: The experience over 15 years of WIL delivery has taught that there is a strong need for being adaptable to meet the needs of all students. Having a cohesive, range of options for students with varying strengths is essential. Those delivering WIL papers need to implement course structures that support the ability to be adaptable and foresee ways that the WIL programmes can respond quickly and effectively to the changing needs of all stakeholders.

Using Personal Development Plans to encourage reflective practice, and to support employability skills development of students in multidisciplinary, industry co-created projects.

Elna Fourie (Wintec).

Background: Established in 2017, Design Factory New Zealand is a co-creation space where multidisciplinary groups of students work with industry partners to solve complex problems. Learning outcomes of the undergraduate Design Factory module not only focus on problem-solving and innovation, but included learning about effective communication strategies, human-centred approaches, efficacy, self-motivation, and the application of future-focused employment skills. Personal Development Plans, as an individual assessed component of the course, are introduced as a tool to encourage meaningful goal setting and active reflection on, and development of, such employment skills. While students are actively participating in a group project, they are also actively leveraging the industry project, and the Design Factory environment and experience, as platforms to achieve their individual goals for self-development. Over two semesters in both 2019 and 2020, this research project has tracked student performance and feedback on the use of Personal Development Plans for individual learning and development.

Unique Features: Design Factory New Zealand offers opportunities for learning about multidisciplinary teams, and the skills required to work in such projects. Moreover, co-creation opportunities which underpin the Design Factory approach allow students to develop and practice employability skills in a safe and authentic way. This discussion will outline how students are supported to set, develop, and pursue self-development goals within this unique project space.

Discussion/Argument: The use of individualised personal development plans, with a focus on goal-setting for 21st century skills, aids students' ability to reflect on (and intentionally work on) their individual development whilst participating in a group-based industry-co-created project. Focus on individual goals within the group project and collaborative environment gives students the opportunity to use the project as a means to intentionally work on developing employability skills, including interpersonal skills, emotional and social intelligence, and professional communication.

This session will highlight examples of students' use and reflection on the Personal Development Plan and will consider student feedback based on two semesters' implementation. This includes a brief look at both the value and challenges of this approach in developing students' application of future-focused skills.

Implications/Issues: How might an intentional and supported focus on self-development aid students' overall learning in work-integrated, group project-based learning experiences?

Introducing Simulated Work-Integrated Learning in Engineering Diploma Final Projects.

Praneel Chand (Waikato Institute of Technology), Matt Foulkes (Waikato Institute of Technology) and Siju Thomas (Waikato Institute of Technology).

Background/Introduction: As engineering education evolves, it is placing greater emphasis on producing work ready graduates. Graduates need a range of soft skills in addition to technical skills and engineering knowledge. The soft and technical skills are often enhanced via student work placements. Workplace learning implemented as a formal aspect of higher education curricula is often called Work Integrated Learning (WIL) (Cooper, Orrell, & Bowden 2010). In simulated WIL, a scenario like workplace learning is created within an educational institution. Within academic institutions, emphasis is placed on project work to build soft and technical skills. This paper/presentation will focus on using simulated WIL for cross-discipline final semester engineering diploma students at a New Zealand polytechnic.

Unique features of the practice: The practice described in this paper/presentation combines the mechanical and electrical engineering project students to develop an electro-mechanical product for a civil engineering client. Students from both disciplines were organised into teams to design a soil drying oven. This arrangement was like a work integrated learning project where diverse engineering students work together to design a product. Members within each group produced individual design concepts in the first stage of the project. The individual designs were then evaluated and combined into an overall group design for further development in the second stage. Concepts and designs were shared at the end of both stages.

Literature: One of the emerging approaches to WIL is Simulated WIL. Simulated WIL enables students to encounter traditional work-integrated learning within an academic institution. A workplace type environment is created within the boundaries of the institution, so that the students feel as they are actually “in real work placement”. There are several advantages to simulated WIL: students can undertake their own learning under more supervision; students gain in-depth understanding of effects of their actions; and more rapid feedback is available to students for corrective actions.

Discussion: A key benefit of learning environments over workplace internships/situations is that they offer an environment with a less self-imposed pressurised set of expectations from the students. This can promote a greater degree of design thinking permitting scope for a variety of novel solutions. Students may also express greater leadership attributes and autonomy rather than perhaps being more guided by an industry professional. Exposure to the nuances of cross-discipline and personal communications skills required also builds teamwork skills.

Implications for the WIL community: Cross-discipline final projects offer an opportunity for engineering diploma students to demonstrate simulated WIL. Projects can be proposed internally or by industry. Running the project course on campus creates a less self-imposed pressurised environment that normally exists in the workplace. More flexibility in engineering solutions can be achieved. Important teamwork and communication skills for cross-discipline projects are also developed.

The Pilot Phase of the degree apprenticeship in engineering with a pathway in asset management.

James Mackay (Wellington Institute of Technology) and Hana Cadzow (Otago Polytechnic).

Introduction: This paper reports on the implementation of the first year of the pilot of the first degree apprenticeship in New Zealand. Curriculum development took place after extensive industry and community consultation and was from the start, industry led. Infrastructure asset management was chosen as the focus of this degree, as it is an area of engineering where personnel are in short supply worldwide, particularly in New Zealand. Initially, the purpose of the pilot was twofold, first to develop a set of blended online courses for the existing degree to make teaching more flexible and secondly to develop a template that can be used to design work integrated projects that could pull together the outcomes of different sets of courses within the degree. In addition, a broader aim was to use the degree apprenticeship approach to improve the representation of Maori and Pacifica students as well as women.

Literature: Apprenticeship is a well-accepted form of training, particularly in the trades. With the demand for a technologically skilled workforce, degree apprenticeships in the last five years have become favoured in Europe and the United Kingdom (UK) as being a solution to this problem (Rowe, 2016). The fact that employers want to have a greater stake in the development of their own staff, implies that employer attitude has undergone some change and continues to do so (Powell, 2018). It has been found that the employer-led model of curriculum development leads to a consistently high standard of training embedded in the workplace, continues on from the training phase until after graduation. Thus, high levels of collaboration between employers and educationalists deliver more rounded individuals, as well as organisations that continue to develop their staff (Goodyer, 2015). The effect on the social mobility of under-represented groups of students, by either class of gender, has also been positive (Clarke, 2018). This project is particularly pertinent when looking at the gender balance of engineering occupations.

Methods: An action research approach was used to develop the blended online courses that make up most of the courses in the degree. The impact of COVID and the disruption to workplace learning in 2020, has meant that the piloting of the project templates as well as the evaluation of the impact of the degree on our industry partners has been delayed by a year and is currently underway. For this, a similar action research approach is being taken in developing templates for the work integrated projects and a case study approach is being used to determine whether the curriculum experienced by the apprentices is indeed the same as the intended curriculum designed by the industry-led curriculum development group.

Developing Soft Skills to produce Work-Ready International Graduate Diploma Students in Engineering: a Comparative Study.

Mohammad Al-Rawi (CEID/WINTEC), Praneel Chand (CEID/WINTEC), Jai Khanna (CEID/Wintec) and Sarla Kumari (CEID/Wintec).

Introduction: Engineering education has increased its emphasis on the development of soft skills to produce work-ready Engineers to meet the requirements of professional accrediting institutions. One key soft skill is confident public speaking. A major impediment to this is confidence with English language, particularly for EAL (English as and Additional Language) students.

New Zealand, like many countries, has an "export education" sector: many international students come to study in New Zealand as an EAL speaker. One offering for International students is the Graduate Diploma, a one year qualification for graduate international students which aims to produce work-ready engineers.

This paper investigates how performance of Graduate Diploma International (GDI) students differed across two cohorts, the 2019 and 2020 intake, in the area of oral presentation skills, when the classes were structured differently: GDI mixed with Bachelor of Engineering Technology (BET) students, and GDI students placed into a separate group from BET students.

Literature: "Soft skills", such as interpersonal communication, teamwork and professionalism are critical for success in an environment of global competition (Farr and Brazil, 2009) and for developing leadership (Robles, 2012; Development Dimensions International, 2016, as cited in Dishman, 2016). Undergraduate research projects develop soft-skills, especially communication (Carter, Ro, Alcott, and Lattuca, 2016), which can be assessed formally via oral presentations. Oral presentations can be particularly anxiety-inducing for EAL students, due to the additional impediment of speaking in a language with which they are less confident (Woodrow, 2006; Mak, 2011).

Methods: We compare the performance of GDI students across two years' cohorts: 2019 and 2020 in two oral presentations for the Final Year Project (FYP) course: the early presentation occuring in April/May, and the final presentation, in November. Due to class size and staff availability, the students in the 2020 FYP course were split into two groups, one containing all international students (GDI students) and one which contained mainly domestic students (the BET). This resulted in some "field data" on the impact of such a split. We compare the performance of the 2020 cohort of GDI students (n = 43) in their FYP presentations to the performance of the 2019 cohort of GDI students (n = 23).

Results: GDI students in the 2020 cohort on average performed better in their oral presentations at both points in the course than GDI students in the 2019 cohort.

Conclusion: Oral Communication is a key soft-skill required of work-ready engineers. The Graduate Diploma is a one year qualification that aims to produce work-ready engineers. When Graduate Diploma International students were placed into a group by themselves, they performed better in oral presentations than when placed into a class mixed with Bachelor of Engineering Technology students.

Ngā taonga hunahuna (hidden treasures) identified in work-integrated learning.

Patricia Lucas (Auckland University of Technology), Sally Rae (Auckland University of Technology), Carolyn Cairncross (Auckland University of Technology), Nicola Waite (Auckland University of Technology) and Robert Hogg (Auckland University of Technology).

Background/Context: Bennett (2018) describes employability as a person's capacity "to create and sustain meaningful work across [their] career lifespan" (pg. 1). Employability research is currently grounded in and typically dominated, by Eurocentric discourse. It is unclear if employability is, or can be, culturally influenced. Undertaking a bi-cultural approach to prepare students for work placements may benefit Māori students by providing the local and global community with enhanced career-ready graduates. Extracted from a broader study exploring Māori Bachelor of Sport and Recreation (BSR) employability from the perspectives of undergraduates, graduates, and employers, this paper probes the experiences and reflections of these Māori students.

Methods: A case study methodology was employed to gain an in-depth understanding of phenomena from multiple stakeholders' viewpoints. This case study is shaped by Māori whakapapa (genealogy) of BSR work-integrated learning (WIL) students. The research was underpinned by Kaupapa Māori, as Henry and Pene (2001) explain "thus embraces traditional beliefs and ethics while incorporating contemporary resistance strategies that embody the drive for tino rangatiratanga (self-determination and empowerment) for Māori people" (p.236).

The research plan included cultural consultation and the development of culturally appropriate data collection tools (such as hui or interviews). Current BSR students, who self-identified as Māori, participated in the study. Interview data were collected and transcribed verbatim then thematically analysed.

Results: The data highlights the value for Māori BSR students having the opportunity, within their degree, to enable and encourage personal development, including the acknowledgment of, and relationship with their culture. As illustrated by this quote; "I just figured it out that being Māori was special". It is important for Māori BSR students to translate those soft skills or hidden treasures coming from their WIL experiences into something recognised and valued by prospective employers. Students commented the industry lacked kaitiaki (guardians) of practices in sport. In line with traditional Māori society, which is based on whakapapa (genealogy) and mana (social prestige), the interpersonal interactions and relationships developed during the students' WIL experiences can be enhancements of their mana and well-being.

Implications for WIL Educators:

- Developing a framework for embedding Mātauranga Māori in WIL; including kawa (cultural practices) and tikanga (cultural principles).
- Creating resources for developing, promoting, and enhancing cultural intelligence.
- Developing culturally appropriate protocols for WIL and employability data collection for further studies.
- Sharing WIL experiences of past Māori tertiary students for future Māori students.

Positive and negative emotions in work-integrated learning.

Patricia Lucas (Auckland University of Technology), Anna Rowe (The University of New South Wales) and Theresa Winchester-Seeto (University of New South Wales and Winchester-Seeto Consultancy).

Background/Context: Work-integrated learning (WIL) is a complex learning arrangement where students learn from those around them and through a wide variety of experiences. Reflective thinking and metacognition are central to this learning. Philosopher and educator John Dewey believed emotion was central to human experience (Hildebrand, 2008) and that it plays an essential role in all learning (Coulson & Harvey, 2013). A reaction to a situation in the workplace and the emotions attached may evoke reflection that enhances understandings and develop self-awareness. Reflection provides a platform for students to develop cognitive, affective and value dimensions where there is interplay between all three dimensions. To date, there is a paucity of research in the context of WIL with a focus on understanding the impact of emotions on learning.

Aims: A broad focus of this study is to understand the role emotions play in work-integrated learning. This presentation examines the types of emotions experienced by students during work placement experiences, and the student emotions reported by WIL supervisors.

Methods: Using a qualitative descriptive methodology data was collected from a cohort of sports students who had recently completed their cooperative education programme and WIL supervisors from several countries. The data was sourced from two broader studies and included student year-long reflective journals (n=10) and WIL supervisor interviews (academic and industry supervisor, professional staff (n=35). All data were coded inductively by two researchers using a thematic analysis approach (Braun & Clarke, 2006).

Results: The student reflective journal tended to focus more on positive emotions related to their workplace experiences rather than the negative emotional encounters. It was also clear from the analysis some students did not use their reflective writing to a great extent to identify and explore the emotions experienced during their learning. In contrast, WIL supervisors when discussing student emotions related to student placements were twice as likely to refer to negative emotions, and several did not refer to or identify emotions within the placement context. It is possible the supervisors recalled those emotions more likely to involve responses from them, and these were mostly strong negative emotions.

Conclusions: Interestingly, students reflective writing drew more on positive emotions in contrast to supervisors who tended to focus on negative student emotions. Exploring emotions in WIL has the potential to add to the practice based literature to support WIL supervisors in linking students emotions and cognitive processes with reflective writing, and therefore learning.