Central Regional Hub-funded project

Project Report

Teaching strategies that build employability skills of vocational education graduates

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Table of Contents

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Executive Summary

It is increasingly important for Institutes of Technology and Polytechnics (ITPs) to ensure their graduates are well prepared for employment, life-long learning and contribution to society. This project was designed to assist teachers in vocational education to embed ways to enhance employability skills within their teaching practices. To maintain a modest scope for the study it focused on programmes NQF Levels 3 – 5, taught across the sector. The aim was to improve learning by producing a toolkit of ideas and teaching strategies drawn from case studies of current practice across a range of contexts. The focus was not on what the students do or say, but rather the strategies teachers used to enable or encourage these skills in the learners. The guiding research question was: *How are teachers in Institutes of Technology and Polytechnics (ITPs) embedding employability skills into their teaching practices?*

Researchers in the project team identified a range of approaches and strategies being used by excellent teachers to enhance the employability skills in their students. The researchers did this in two ways; firstly, by observing classroom and online practices of 23 selected teachers from a range of disciplines at seven participating ITPs. Secondly, the researchers interviewed the teachers they had observed and asked them to elaborate on the ways they develop employability skills in their learners. Teachers were asked to answer semi-structured questions to identify how they *consciously* develop a selected list of employability skills, or capabilities.

The list of ten capabilities were taken from seven desirable attributes outlined in an '*Employability Skills Framework*' (Careers NZ, 2017); namely, *positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience,* plus the three additional categories of *innovation, entrepreneurship* and *cultural competence*, derived from project team discussions and reflections on the literature reviewed.

The data from observations and interviews was entered into Survey Monkey by team members. Next, reports were generated to collate and provide an initial sorting of contributions, and assist the team to identify emerging themes. For each capability, the researchers scanned the entries to identify examples of good practice that were judged to be replicable in other institutes, and/or transferable across programmes and contexts. These examples were categorised as either overt teaching strategies, which were explicit to learners, or covert teaching strategies, in which the link to employment and work place skills was implicit, and may not have been as readily identified by the learners, even while the learning experience added to their toolkit base. A total of eighty-four teaching strategies were documented, which form the basis of this project's contribution to the Ako Aotearoa community and our colleagues across the wider tertiary education sector.

The key output from the project are the *Guidelines for teaching strategies of employability skills.* These are available on the Ako Aotearoa website https://ako.ac.nz/knowledge-centre/teaching-strategies-that-build-employability/ and designed for easy navigation around the ten employability capabilities, and offer a range of practical, proven approaches used by the experienced teachers. The *Guidelines* are written to be as accessible and practicable as possible, for teachers to interpret easily and apply in their own context.

The *Guidelines* have been designed for use by:

- Teachers in ITP organisations and across the vocational education sector
- Teachers of vocation-based programmes, and those whose students have work experience, work placement or internships as an integrated element in their qualification
- Teacher trainers and educational developers who work with the above groups of teachers, and with teachers new to tertiary teaching who have little experience or knowledge of teaching and learning pedagogy or the principles of adult learning.

Terminology

Throughout this document we have used the following terms, shown in Table One:

Table One: Terminology

ITP	Institutes of Technology and Polytechnics
Educational developer, educational designer, educational advisor	Staff employed within the ITP sector who assist staff, management and governance to identify, create and deliver professional development (PD) offerings focused on the improvement of learning and teaching. PD may take many forms and may be for individual staff, groups of staff or the whole of a school, department or faculty of an institution.
Staff	Educators, teachers, lecturers and tutors employed to teach in an ITP.
Manager	Managers of those staff in an ITP. They may at times also teach, and often will have been a teacher.
Tutor, teacher, educator, vocational educator	Staff employed in a school, department or faculty of an ITP.

Background

Knowing how well Institutes of Technology and Polytechnics (ITPs) prepare learners for the working world is becoming more important. The Tertiary Education Commission (TEC) now seeks evidence of the effectiveness of programmes of study in preparing graduates for industry. The TEC requires ITPs to report on employer and graduate satisfaction, and also measures the value of qualifications to inform choices when enrolling to study, through online surveys such as Rate My Qualification.

Inspired by a keynote speaker, Shelly Kinash, at the National Tertiary Learning and Teaching Conference, 2016 and Australian research, the project team wondered how it might assist teachers to design teaching and learning strategies for embedding skills that enhance employability. This project focused on areas likely to have the greatest impact, across various programmes (Levels 3 – 5) taught in most ITPs.

The project team included educational developers from a range of regions, disciplines, qualifications and industry sectors. Many of the team had worked together in a previous Ako Aotearoa hub project *Designing professional development for experienced teachers in tertiary vocational education* (Duignan et al., 2016). The current project reunited the team, provided an opportunity for other colleagues to join, and has become an excellent vehicle for those new to research to grow their own capability and experience by contributing to an inter-institutional inquiry. A unifying interest common to all, and highly topical within the wider tertiary environment, is the need to prepare excellent industry-ready graduates, who are 'work-ready plus' (Scott, et al. 2008; Scott, 2013). That is, graduates who are equipped for not only for the workplace of today but also able to participate and contribute to society tomorrow.

A preliminary overview of the literature related to work readiness and transitions from tertiary study into employment revealed a dearth of writing about improving teaching practice in this area. There

is plenty of information about an employability skills gap, which is a concern for teachers, institutions and industry, but very little about how this is being addressed in teaching.

Based on our collective experience, the team conceptualised the project as fitting within, and complementing frameworks and models already being used by the tertiary sector. Once we identified the focus area of ITP programmes between Levels 3 to 5, we agreed that the Employability Skills Framework released in 2017 by CareersNZ would provide an excellent benchmark and make our reporting more meaningful to colleagues already familiar with its design. The Employability Skills Framework describes certain skills, which "New Zealand and international employers tell us … are essential for getting and keeping a job", such as, *positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience* (CareersNZ, 2017; Vocational Pathways in Youth Guarantee – youthguarantee.net.nz, n.d.). However, this Framework is not only generic, it is oriented towards lower level learners. So, in addition we decided to incorporate other attributes, such as *innovation, entrepreneurship* and *cultural competence* in the criteria. This aligns with a bigger picture of employability skills which includes preparing learners for employment opportunities 'at the cutting edge', for advanced programmes of study, and for employment in roles which as yet do not exist. The data collection tools which reflect these criteria determinations are included in this report as Appendix A.

Research aims

The project was guided by the overarching research question: *How can teachers in ITPs embed employability skills into their teaching practices?*

The objectives were:

- To provide qualitative information from good teachers about the overt and covert strategies they used in the classroom to develop learners' work-readiness skills, alongside curriculum content
- To report this in a framework which aligns to national strategies, such as the 'Employability Skills Framework' (Careers NZ, 2017), and large studies of desirable graduate attributes reported in the literature, such as Scott, et al. (2008) and Scott (2013).
- To build collaboration and capability amongst the project research team, as this project includes both members from a previous inter-institutional Ako Aotearoa Hub-funded project, and new members
- To establish a task for the Ako Aotearoa Central Hub to meet and build members' collegiality.

Intended outcomes and benefits

The outputs intended from this project were:

1. A resource which offers a toolkit of ideas, teaching strategies (ideas about what activities can be used to embed employability skills for our students) drawn from case studies across a range of contexts, for transferable application. These can be viewed now at https://sites.google.com/view/employabilityskills
2. A report on the findings (this document).
3. Presentation and publication of findings to appropriate audiences.

Teaching practice benefits:

Teachers preparing their learners for employment would find the guidelines valuable – and arguably this means all teachers in the Vocational education sector. We intend that participating organisations act on the project findings by using them to inform teaching practice. Project team members will share the findings within each participating organisation via staff meeting presentations, newsletters, intranet, and training workshops. For example:

- At Wintec (Centre for Business, IT and Enterprise), regular 'Best Practice Forums'
- At Toi Ohomai and EIT, regular lunchtime workshops for staff.
- At WelTec and Whitireia, staff professional development days and research forum.

Internally, teaching and learning teams and staff developers will use the resource to work with tutors and programme leaders to embed employability skills and strategies in classroom practice and address any gaps in curricula. Externally, project outcomes will be shared via conference and symposia presentations, article publication(s) and possibly Ako Aotearoa PD workshops.

Learner benefits:

We expect richer capability for employability resulting from embedded teaching strategies fostering those skills named in the Employability Skills Framework. Learning design that is more authentic, that is, that includes learning activities that are as close to 'real life' as possible, can draw from this project. A deeper awareness of the need for employability skills as a result of exposure of their teachers to the skills and ways to embed strategies to teach them. Learners in programmes in the participating institutions and elsewhere will benefit from their teachers applying well-chosen and commonly used teaching approaches that enhance the employability skills in graduates. These learners will be enrolled in the range from foundation to post graduate programmes.

Institutions in the ITP sector benefits:

Indirectly, institutions reporting to The Tertiary Education Commission (TEC) on the effectiveness of programmes of study in preparing graduates for industry will have more confidence in the teaching practices of those who apply the strategies identified in the findings. It may happen that graduates will reply more favourably about the programmes they have undertaken when completing TEC's online surveys such as Rate My Qualification.

The seven participating organisations have provided the pilot case studies for the investigation of embedded employability skills development and ideas for good-practice guidelines, and so will be already acting on the project findings by comparing practice with curricula descriptors. The research team's aim is to embed the use of the resource beyond the study period as an ongoing practice for working with vocational teaching staff and programme developers.

Research team benefits:

Through their work on this project, members of the research team have developed expertise in ways to embed employability skills in learning design and teaching on a range of programmes at their institutions. By working together on this project, the team has built good working relationships, common understandings of their approaches to teaching and learning, and research, and laid the ground work for further work project work together. No doubt this project will form part of the groundwork for future collaboration.

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The guidelines and project findings may be promoted to the wider sector for external dissemination, such as workshops within Ako Aotearoa's Professional Development series if there is a demand.

Employers

Employers of entry-level employees who have graduated from the ITP sector should enjoy the benefits of staff who are better prepared for work, having discovered more about being life-long learners and contributors to society.

Responsiveness to Māori and Te Tiriti o Waitangi

Māori participants may have volunteered for the research project because they match the characteristics required for the study. However, Māori participants were not specifically recruited for this research project because it is intended to take a wider view. In designing the project we did not seek to identify the ethnicity of participants while conducting the research. Many teachers are Māori, as are their students, and therefore it is hoped that the project findings will inform their practice and support their Māori learners.

While we accept that, as there are teaching approaches that are particular to Māori cultural contexts, there may also be employability skills that are particular to these contexts. The team chose to look at employability skills within broader cultural contexts (not exclusive of Māori or any other demographic group) in part because research on learning design and teaching strategies that embed employability skills appears to be a green field, and in part because the work reflected the cultural context of the researchers. Members of the team would be delighted to support parallel research situated in other cultural contexts.

Literature Review

Background

Australian academic Shelley Kinash was a keynote speaker at the New Zealand National Tertiary Educators Conference held at Rotorua in 2016. In her presentation she acknowledged that the presence of graduate attributes and graduate profile is in many of our organisations' programme documents but questioned us strongly on our commitment to ensure that our graduates were truly ready for employment. It is this observation that led this research team to decide to look more closely at employability skills as part of teaching practice. Our experience in supporting teachers to embed literacy and numeracy into ongoing teaching (as opposed to teaching it specifically) led us to wonder whether there might be a parallel with employability skills. In addition, Kinash's work is based mostly in the University/higher education setting, and we were interested in how it worked in a more vocational education setting (Kinash, n.d.).

This review considers a sample of the literature that informed our thinking in developing this project. It is interesting that of the research projects and articles we uncovered in our search, the majority were of programmes relating to business subjects taught in higher education. This suggested the literature may have a bias towards business and corporate types of employment, and university study for degree qualifications. Research based on the Vocational Education and training (VET) sector and focused on trades and other practical subjects appeared rare.

This research lies within a functionalist or utilitarian paradigm which is entirely appropriate, given the pragmatic focus of the research question and objectives. However, in a wider sense the concept of education as a preparation for employment assumes certain ideological viewpoints. To that end the project team wondered at the value of work-ready graduates fitting into the wider web of social and economic relations to serve the interests of the 'power' status quo and reinforce power asymmetries in everyday life that continue to be reproduced by an education system that often purports to be about social equity and justice (Habermas, 1971; Mezirow, 1981; Scott, et al. 2008). The team acknowledged those times when learners themselves become critically reflective and they

bring their "assumptions, premises, criteria, and schemata into consciousness and vigorously critique them" (Mezirow, 1985, p. 25).

Therefore, the researchers in this study adopted the following, broader, definition of graduate employability;

> Employability means that students and graduates can discern, acquire, adapt and continually enhance the skills, understandings and personal attributes that make them more likely to find and create meaningful paid and unpaid work that benefits themselves, the workforce, the community and the economy. (Oliver 2015; Yorke, 2006).

Employability Skills

The concept of employability as an institutional achievement began to emerge in education in the late 1990s when the idea that employment and serving the economy should be a primary outcome of education came to the fore (Lees & Benza, 2015). There is a subtle distinction to note a change from the traditional goal in vocational education for the institution to simply support the *propensity* of the individual student to get employment. Now there is more accountability for the institution to be purposeful in achieving placements and retention in the workplace of its graduates. (Maurice-Takerei, n.d.).

Today there are a number of definitions of employability and a number of taxonomies describing just what the skills are. Lees et al. (2015) use a definition of employability from the UK Higher Education Academy:

> *'a set of skills, knowledge and personal attributes that make an individual more likely to secure and be successful in their chosen occupation to the benefit of themselves, the workforce, the community and the Economy'* (p252)

These authors also make a point of clarifying the difference between employability and employment - the former is about the ability to function well in a job, whereas the latter refers to the ability to successfully gain a job.

Within the literature, there appear to be a number of terms more or less synonymous with employability skills. Green and Blaszcynski (2012, pt. 1, p. 1) write about 'soft skills' and say that this term includes employability skills in addition to "core skills… essential skills, generic skills, key competencies, transferable skills". They quote Perrault's (2006, p. 125) definition of soft skills as "those traits and capabilities that an individual possesses in addition to the individual's technical and/or knowledge and skill set". Zepke and Leach (2010) explain "'soft' outcomes have characteristics setting them apart from hard outcomes; "success is not measured directly or tangibly but by distance travelled by learners towards programme goals rather than by their final achievement" (ibid, p663). They argue while most of the 'soft' outcomes model include categories, such as key work, attitudinal, personal and practical skills, they can vary widely, being sensitive to context.

It may be a characteristic of a new field that a wide range of definitions and taxonomies are used to describe it. '21st-century skills' does not appear in Perrault's list of soft skills above, though many authors clearly regard it as another synonym in the mix (Mitchell et al., 2010). For example, the 21st-century business environment is characterised by increasing complexity, rapid change and the need for innovation (Chong & Benza, 2015; Gerstein & Friedman, 2016; Lee & Benza, 2015, Yusof, et al., 2015). Others note important omissions, such as 'cultural competence' that is sometimes absent from the lists, yet should be there (Liu & Dall'Alba, 2012; Tehami, 2017), as well as the use of technology (Adams, 2014).

A useful summary position is provided by the Ministry of Education (n.d.) which defines employability skills as a set of behaviours, attitudes, beliefs and unique personal qualities that

enable a person to get and keep a job. They differentiate this from 'work readiness skills', which are skills that directly relate to the employment process; and 'specialist or technical skills' or 'hard skills' that are specific to the particular industry and workplace.

The need to teach employability skills

Government strategy

The *Tertiary Education Strategy 2014-2019* (TES) outlines the government's priorities for tertiary education. It identifies six priority areas; of these, *Priority 1 Delivering skills for industry* prioritises areas of skills shortage that include:

> "Information and communications technology, science, technology, engineering, mathematics. These are the types of skills needed for innovation and economic growth.
>
> It also means ensuring tertiary education supports the development of transferable skills that are needed in all workplaces such as communicating well, processing information effectively, thinking logically and critically and adapting to future change (Ministry of Education, 2014).

Responding to this are a plethora of frameworks and funding initiatives. The *Youth and Transition Framework* (Tertiary Education Commission, 2016) brings together all the themes of the TES under four focus areas. These include young people gaining a qualification, developing skills in the priority areas identified above, and transitioning successfully into employment. Unlike the TES this document does not specifically mention employability skills. This may because its purpose is to identify and describe funding schemes. Perhaps this is a signal that while the government thinks the 'soft' skills are important, they are not important enough to recognise through funding processes.

In the first decade of this century the Government released a *Skills Strategy Action Plan* to focus on the structural qualifications and acquisitions of skills to support the economy. In response to this there was some work initiated to develop a generic soft skills framework in tertiary education (Ferguson 2010), work that seems not to have progressed.

More recently through one of the funding pathways identified in the *Youth and Transition Framework* the Ministry of Education has published the Employability Skills Framework (n.d.), This was developed by an advisory group which included employer and industry representatives, government agencies and people engaged with education. It is designed for young people preparing for employment and contains seven characteristics: (1) Positive attitude; (2) Communication; (3) Teamwork; (4) Self-management; (5) Willingness to learn; (6) Thinking skills (problem-solving and decision-making); and (7) Resilience. It is worth noting that there are some differences between the former list and those identified in the latter. It may be that this list is directed at young people, particularly at risk young people; whereas the TES relates to the wider tertiary education context.

Our research team has taken the seven items in the *Employability Skills Framework* list as the basis for our observations of teachers in practice.

Employers value employability skills

Employers are the key stakeholders in the quest for employability skills for it is they who will be employing the people emerging from education programmes bearing newly minted qualifications. Panels that develop lists of employability skills usually have a significant membership of employers and industry people; the panel that developed New Zealand's Youth and Transition Framework is a good example.

In one such piece of work, Chavan and Surve conducted a survey of Human Resources (HR) managers and more than 20 companies who identified that the most lacking employability skills

among newly recruited employees were (from more lacking to less), "Communication… Management/prioritizing …, Self-confidence … and Decision making … are (the) most lacking employability skills among newly recruited employees." (2014 p258). This same group identified the most important employability skills (from more important to less) were: "Integrity and honesty, Problem-solving, Teamwork, Self-confidence, Communication skills" (ibid).

In another study, Fourie and Cloike (2013, 2014) surveyed a number of employers in the Waikato to identify their priorities in employment skills they were: interpersonal skills, oral communication, initiative, self-management, and written communication.

A study at a North American university that involved 14 employers, 14 faculty members and 14 staff members of the "research site" within the university. The authors asked questions about the level of integration of a set of ten 21st-century skills in the classroom and those practised by graduates. The researchers concluded that the four key 21st-century skills for learners at a North American University were interpersonal communication, critical thinking, information literacy and "adroit writing" (Campbell & Kreysman, 2015, p.24).

Student implications

Students are also stakeholders. We discovered two studies that focused on students. In the first, the researchers surveyed a group of 35 business students from a UK university and discovered that students perceived employability in a hierarchy of ways:

> Employability as a 'noun'
>
> Category 1: Employability as a possession meaning 'I can do any job'
>
> Category 2: Employability as an acknowledgement meaning 'I can do this job'
>
> Category 3: Employability as a position that 'I can do this job better than others'
>
> Employability as a 'verb'
>
> Category 4: Employability as the behaviours required when 'I am doing this job'
>
> Category 5: Employability as a personal responsibility so that 'I can keep this job'
> (Lees et al., 2015, p. 255).

The authors concluded that there is "a need to reorient student perspectives on employability to encompass a conception which encourages self-reflection and self-development rather than simply viewing the concept as an object they possess upon graduation" (p. 257). When looking at this insight through the lens of Vygotsky's 'zone of proximal development', it becomes clear that spending time working with learners to understand their perception of employability skills is where the teaching should start. This suggests that the notion of including employability skills within teaching should also be explicit, in order to inform students about these critical factors for being successful in employment.

Lievens and Wesseling (2015) tracked students going from training into employment and concluded that those who had remained longer with the training organisation had better "person-job fit" than those who had left training earlier, even although their technical skills were similar. In the New Zealand context, this observation echoes the familiar situation of a student leaving a training programme in order to 'get a job', who may have acquired sufficient technical skills to do the work, but may still lack the employability skills to successfully and seamlessly fit within the workplace and team.

Approaches to teaching employability skills

This section looks more closely towards the core of our research project - the ways in which employability skills can be taught. First we will consider literature that describes the approach to

designing learning environments that develop employability skills, then we will look more specifically at what these look like in practice.

Design/frameworks

In most courses employability skills are seen as distinct from the subject matter being taught. Indeed at many institutions employability skills appear in the graduate profile, whereas the subject matter appears in the course learning outcomes where they form the focus of the course work and assessment.

Gerstein and Friedman (2016) criticise this practice of focusing on learning outcomes that shape hard skills when the rapidly changing (US) labour market really needs “disciplinary knowledge plus (employability) skills” (p. 114). What is needed instead, suggests Green and Blaszczynski (2012) is to “join the three R's - reading, writing, and arithmetic with the four C’s - creativity, collaboration, communication, and creative thinking” (p. 4). Kemmis et al.’s (2012) Australian model suggests similar coverage, but separated into three dimensions: (1) technical or discipline specific skills; (2) employability skills; (3) core LLN (literacy language and numeracy) skills.

Most commentators concur that soft skill development should be a continuous process throughout the curriculum rather than a ‘one shot’ approach and cannot be taught in isolation from other subject matter. As McEwen (2010) asserted, soft skills "cannot be taught independent of other subject matter but must be regularly integrated into the lessons [and] consistently reinforced" (p. 152). In summary, employability skills deserve their place, their teaching needs to be visible and it needs to be integrated.

A view that at first read appears to be contradictory, but on reflection perhaps is not, is that of Cranmer (2006), who casts doubt as to whether employability skills should be taught in the classroom at all. Working from a UK university perspective, she argues that research into labour market outcomes from education show better outcomes when employment-based training is incorporated into university courses. From this she argues that a better approach would be to increase employment-based training into university courses, and focus the classroom-based time more clearly on the skills outcomes.

From a perspective that is perhaps slightly more 21st-century focused, Adams (2014) has considered the process of teaching employability skills in an e-learning context. She offers the following research-based, concrete advice for promoting learning with direct impact on performance:

> Select Content Wisely: Ensure underlying assumptions enable soft skill, not hard skill development.
>
> Empower Individual and Collaborative Learning: Encourage learners to take ownership of their own development
>
> Reward Appropriately: For soft skill development, embrace performance learning, not compliance (p. 9).

Such considerations align with the classroom practices we observed during this project, support the examples we include in the *Guidelines* document that accompanies this report, and clearly have a place when designing vocational learning experiences.

Embedded, modelled or externally taught?

As this research project is about embedding employability skills into regular teaching practice, it would be useful to consider what the literature has to say about these approaches.

The first thing we noticed was that we could not find any author who supported the idea that employability skills should be taught separately from the subject context. This is in contrast to our experience working in institutions where it is not uncommon to have, for example, a communications course as a separate event within an engineering degree.

Cranmer (2006) offers a context for this. She describes three methods of delivering employability skills, two of which have a low impact on the effectiveness on the curriculum and one which has a high impact. The methods are:

- Total embedding, in which the skills themselves are not made explicit although they are taught, and the risk is that the skills become lost in the context - the skills are modelled but not examined (low impact)
- "Parallel development" where employability skills are taught in separate courses, which makes it difficult to contextualise the skills (low impact)
- Explicit embedding and integration in which the skills are taught and made explicit, including being assessed (high-impact) (Cranmer, 2006, pp. 170-171; reconfirmed by Green & Blaszczynski, 2012).

Another way of looking at this is through the lens of the 'hidden curriculum' which involves the teaching of concepts that are never fully explained in class. For example, students might be working in teams to complete a task, and the focus of the teaching and the assessment is entirely on the content of the task rather than on the process of working in the team. If the teacher does not announce that working in a team is important and it is part of the curriculum, and allocate marks, then the students will not pay attention to it as part of the learning (Bedwell & Fiore, 2014).

There might be a continuum between 'bolted on' employability skills and 'design thinking' when the design of the course implicitly requires the development of employability skills. For example a course designed to encourage and support innovation is an effective way to teach innovation itself. In a course that is structured around a well-designed process, the content can often look after itself (Chong & Benza, 2012; Lee & Benza, 2015). Of these authors Chong and Benza, when describing an MBA programme, suggested that in order for this to be effective it requires a small class, flexible teaching spaces, physical resources to support the subject context, sufficient time and the right teacher.

Getting more specific about acts of teaching, Green and Blaszczynski (2012) describe in detail a series of mostly group-based learning activities that can help students develop employability skills, and that can be adapted to a number of contexts. The authors emphasise that embedding employability skills needs to be a conscious act on the part of the teacher, and the learning of employability skills needs to be a conscious act on the part of the learner.

Other learning approaches that are well suited to developing employability skills in context with technical skills include:

- Responsible learning, in which learners take ownership of the learning process through more active participation
- Experiential/authentic learning, in which the learning environment is as close to or within the actual work environment, where learners are doing things in order to learn
- Cooperative learning, in which learning environments are designed so that students learn from each other as well as a range of other people, including the teacher
- Reflective learning, where learners are encouraged to appraise their experience and identify changes in their own "perceptions, goals, confidences and motivations" (Kemmis & Hodge, 2014, pp. 8-9).

Kemmis and Hodge note that "this kind of specific pedagogical advice is not included in the Certificate IV in Training and Assessment, the mandated minimum qualification for VET teachers in Australia" (p. 9), while Simona (2014) has identified the need within the European Union to develop training approaches for VET teachers in order to ensure that employability skills are given value equivalent to that of hard skills. These two final comments suggest that as the teaching of employability skills is relatively new in tertiary education, teachers themselves generally see the

value of teaching employability skills explicitly, whereas teacher development programmes have not universally caught up.

Conclusion

While the literature reported here has been selected to provide an overview of the key themes in current discourse, not all these themes are explored in the current project.

The project only involved the teachers themselves. Therefore the Findings and Discussion sections which follow focus entirely on the perceptions and preferences of the experienced tertiary teaching staff and researchers in the project team, and not any other stakeholders. Nonetheless, many of the ideas outlined above are pertinent to our participants' contributions; teaching is not an isolated or unconnected activity, and there are likely far more congruencies than differences between the values and aspirations of all parties involved in the pursuit of teaching excellence. Further, both the project team researchers and those teachers who were deliberately selected are well respected by peers and management at their institutions and across the sector. Their views are valid, born of extensive expertise in teaching and learning, and exemplify many of the themes identified in the literature and outlined in this overview.

Method

Data collection and methodology

The methodology for this project adopted a case study approach, involving 23 experienced teachers, evenly spread across each of the seven participating institutions. Selected teachers from these institutions were invited to participate by personal invitation from each of the researchers. The basis of the selection was that they were known to the researchers as being good teachers (many having been recognised by their organisation with internal awards), and they were teaching programs between Levels 3 and 5.

What the project team did

Literature search

An initial literature search was conducted to inform the case study design, then expanded after the fieldwork was completed. It is now captured in the Literature Review above.

Procedure

Teachers who agreed to be observed were asked read the Information and Consent Form and to sign the agreement to participate (see Appendix B). This form outlined the project and stated any potential risks (none were foreseen), and asked participants to identify themselves, their subject area and their institution. Once the project participants were identified, the researchers ensured there was a range of subjects and only NQF Levels 3-5 (to keep the scope of the study modest). Then the project team followed this process:

1. The researcher undertook a classroom observation with each participant teaching a regular classroom session. The particular focus of this observation was to identify strategies and events in which the teacher was embedding skills to enhance employability. They noted each item they saw on the observation record form. The focus was clearly on the teacher's strategies – both planned and spontaneous – rather than what the learners were doing or saying.

2. The researcher interviewed each teacher, using semi-structured questions to bring out the teacher's understandings of, and ideas about, how they embed employability skills into their teaching. The questions were:
    - Where do you consciously, purposefully teach employability skills as described in the graduate profile of your programmes? (unprompted);
    - Where do you usually embed in your teaching, ways to enhance the skills on the Employability Skills Framework? (Prompted using a checklist of the Employability Framework and other skills).

Informing this process was an understanding that emerged through discussions within the research team that the teaching strategies we were looking for may be *overt* or *covert*. *Overt* strategies are ones that the teacher designs with a specific purpose that includes the learners developing employability skills. Often (and arguably ideally) this purpose is made explicit to the learners. Teachers may explicitly link the activity to a particular skill(s) needed for the workplace, or they may situate an activity clearly and specifically in a workplace context.

On the other hand, *covert* strategies are often short-term, 'run of teaching' strategies that have the effect of enhancing employability skills, but may be out of the awareness of both the teacher and the learner. For example a teacher may describe an event that occurred in a workplace that demonstrates employability skills but not be explicit that this is what they are doing, or ask the learners to do anything with it. Or, they may get the students to work in teams, but not create a context that simulates an employment setting.

3. The researchers analysed the aggregated responses from all the institutions and did not differentiate, compare or contrast between institutions. Neither were names of respondents nor their organisations linked to particular responses.
   The team completed a content analysis of the interview and observation data to identify practices that matched the list of skills in the *Employability Skills Framework* from CareersNZ. (2017). These skills were; positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience.

The overall dataset informed the project Findings and Conclusions, and identified commonly used practices, easy to embed into teaching practice and likely to be effective for learners. These practices informed the writing of one of the research outputs, the *Guidelines* for good practice in embedding employability skills.

Sampling

Teacher participants were selected according to the following criteria:

- Known by project team members for their good teaching practice
- Previous classroom observations in which they embedded employability skills
- Experience as tertiary teachers (i.e. generally not novice teachers)
- Strong relationships with their employer stakeholder groups
- Good graduate employment outcomes of their graduates
- Acknowledgement from their managers, deans and heads of schools and peer teachers as suitable candidates
- Recognised by the organisation with internal awards or commendations as excellent teachers
- Teaching in a range contexts, subject areas and NQF levels of programme, from Levels 3–5.

Profile of respondents and observations

The 23 teachers' sessions observed were evenly distributed from various disciplines, such as:

Plumbing, accounting, patisserie, electrical, music technology, seafaring, business administration and management, counselling, Te reo Māori.

Observations were distributed across institutions:

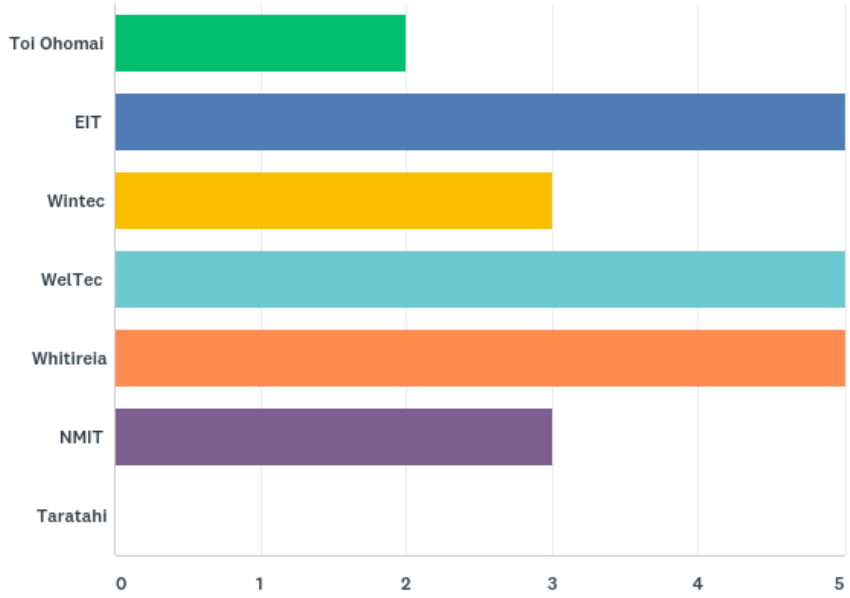

Figure 1. Participants by institution

Participants were also drawn from a range of demographic categories, aiming for a broadly applicable cross-representation of staff teaching in these areas:

Table Two: Participant profiles

Years teaching experience				
< 5	5 -10	11 - 20	> 20	
4	9	2	6	
Employment status				
full-time	part-time			
22	1			
Age				
< 25	25-44	45-54	55-64	65+
0	5	6	5	3
Sessions observed by NQF Level				
Level 3	Level 4	Level 5		
7	8	8		
Duration of session observed				
60 minutes	90 mins	120 mins		
20	2	1		
Ethnic group (Ko tēhea momo tāngata e whai pānga atu ana koe?)				
European/ Pākeha	Māori	Pacifica: Māori Hāmoa, Māori Kuki, Airani, Tonga, Niue	Asian / Hainamana, Inia	Middle Eastern / Latin American / African
17	3	1	2	0
74%	13%	5%	9%	o

Ethical considerations

Full ethics approval was granted by the WelTec and Whitiriea joint Academic Board Ethics Committee, then the ethics committee of each of the other ITPs taking part also approved the project to proceed.

All participating respondents signed an Information and Consent Form (see Appendix B) which outlined the project and stated potential risks (none foreseen). Respondents were advised that participation was voluntary and would not in any way affect their ongoing employment terms and conditions.

The project did:

- Collect personal information from individual respondents, e.g. age, gender, ethnicity
- Include respondents from different social and cultural groups, including Māori and Pasifika. However, Māori and Pacific respondents *volunteered* for the research project and were not specifically *recruited* for this research project. Many teachers are Māori or Pacific, as are their students, and therefore it is hoped that the project findings will inform their practice and support their Māori and Pacific learners

The project did not:

- Have the potential to cause physical or psychological stress
- Involve deception or potentially illegal activity, which might cause emotional, physical or psychological stress
- Involve children, Whitireia or WelTec students under 16 years, or other vulnerable participants (including those who are unable to give informed consent)
- Include a situation or activity, including deception or potentially illegal activity, which might cause discomfort or harm to the respondents or researchers

Research data will be used only for the purpose for which it has been collected.

All research data is being made available via SurveyMonkey by requesting directly from the project leader.

Respondents were invited to view sections of the final report in the project space on the Ako Aotearoa web site according to any permissions applying to that site.

Limitations of the project

This report will only refer to responses from the sample (23) and no comparisons have been made regarding findings between participating institutions or other tertiary education organisations nor particular teachers nor their discipline areas. This study focusses only on teaching strategies used by teaching staff.

Findings

This section of the report describes the main teaching strategies identified for each of the employability skills, either those overtly displayed during the observations, that is, made explicit to the learners, or the more implicit or covert practices, still intended to promote the employability skills in learners. At times these second practices may even have been less than obvious to the teacher themselves, until reflection prompted by the researcher during the interview, which took place after the observation stage.

The responses are summarised thematically according to the list of employability skills chosen for the project. At times major concepts were identified by respondents and their use explained by the teachers. Selected quotes are used verbatim to illustrate typical responses.

Evidence of the employability skills observed during the session

Figure 2 shows how often the ten skills were 1) evident and demonstrated overtly; or 2) were evident but covert, that is, implicitly demonstrated while embedded in the teaching and learning; or 3) were not evident. Most overt were *communication, self-management,* and *thinking skills*. Most covert were *willingness to learn* and *positive attitude*. The least likely to be observed were *innovation* and *entrepreneurship.*

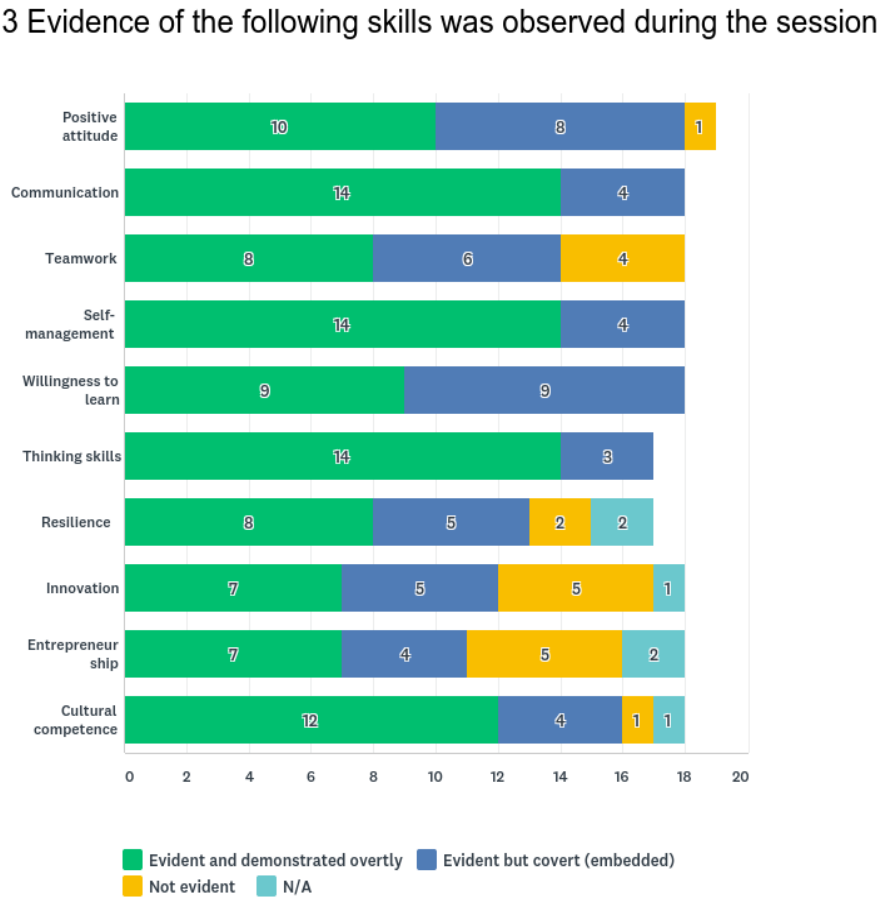

Figure 2: Evidence of the employability skills observed during the session

The researchers were asked to identify rich examples of ways each skill was demonstrated or described in the data. They chose examples from those in the recommended *Guidelines.* They identified two kinds of strategies:

OVERT – up to five strategies per skill, *explicit* to the learners, applicable in a wide variety of subject contexts

COVERT – up to five *implicit* strategies, not made obvious to the learners as preparing them for work.

Teaching strategies identified

Positive attitude

Our team's definition of this attribute was:

Having a 'can do 'attitude; being optimistic; being honest; being friendly and showing respect; demonstrating motivation to work hard taking initiative; ethical integrity; self-confidence; professionalism.

Broadly, teachers were *observed* by researchers *explicitly* establishing a positive and productive learning environment, with expectations which explicitly parallel industry standards. They established a system which celebrates learner progress, clarifies gaps and provides feedback and feed forward guidance.

Some examples observed by researchers:

- A marks spreadsheet is maintained so students can appreciate their progress and work on the gaps.
- Students are visited in practice settings three times per year, when teachers are looking for self-belief and evidence of the learner meeting five specific dimensions of competency. These are made visible to students and if not met, goals are set to support achievement.

When prompted to describe how they *implicitly* foster this skill, teachers said they personally model the diverse elements of 'positive attitude' and affirm positive attitude and effort in their learners.

One respondent said, "It's about my attitude … towards the subject, as much as the learners. What messages am I giving them to foster positive attitude, self-belief and professionalism?" Another said: "I keep it friendly and accentuate the positives rather than the negatives. I keep it real."

Commentary

Excellent teachers foster positive relationships with their learners inside and outside the classroom. For example, they might be heard saying "I saw you working hard in Study Room 10" and give a thumbs-up. For these teachers positivity is an attitude of mind and they encourage a positive learning environment. This builds confidence and prepares learners for the workplace environment.

Communication

For the project team, this employability skill included:

> *Being aware of how my communication affects others; asking questions; listening actively; showing respect in all communications, oral and written; social skills.*

Broadly, teachers were *observed* by researchers *explicitly* responding honestly to questions, encouraging questions, involving individuals and groups in class, modelling professionalism and authenticity. As one respondent said, "I accept any deficits and use storytelling and share personal experiences."

Some other examples observed:

- Being attentive, supportive, acknowledged identity, such as, use of learner names, active listening and encouraging feedback.
- Peer mentoring, group work and reporting back.

When prompted to describe how they *implicitly* foster this skill, teachers said they demonstrate non-verbal communication, use facial expression, enthusiasm, are good listeners, demonstrate inclusive communication and are affirmative. They demonstrate skills in teamwork, group discussions and feedback. They develop relationships, and use words like "please" and "thank you". Also they manage conflicts and disagreements within teams and are assertive where necessary.

Commentary

Excellent teachers reinforce good workplace communication concepts by using many strategies such as repetition, and they apply these concepts in practical situations. They constantly encourage participation from all learners and implement a feedback loop with their learners. This in turn prepares learners for the challenges they are likely to face in the workplace.

Teamwork

We defined this attribute as:

> *Working well with others to complete tasks; contributing to new ideas; working well with others of different genders, cultures or beliefs; following the directions of my peers and seniors; forming positive relationships; developing leadership ability.*

Broadly, teachers were *observed* by researchers *explicitly* using exercises to generate ideas, like brainstorming and group discussion. They encouraged learners to ask and answer each other's questions and problem-solve together. One employed a class brainstorm strategy as a response to an individual's query. Teachers emphasised the value of learning from others and gaining multiple perspectives. They reinforce the concept of synergy – the whole is greater than the parts. One respondent said that he emphasises to his class: "Be collaborative. Speak up. You are really important. You could change the whole way a workplace does things."

Some examples observed:

- Making overt links to the workplace.
- Using structured authentic activities done in teams, such as role plays.
- Applying the Think/Pair/Share method:
  i) beginning thinking alone (solo); then,
  ii) sharing with peer and buddy learner (pairs); then,
  iii) merging responses with others into group(s) and sharing with the whole class.

When prompted to describe how they *implicitly* foster this skill, teachers said they remind learners that even in individual tasks, informal collaboration and teamwork can still be a part of the development process – like consulting others for multiple perspectives in a workplace task. They encourage learners to see peers as additional resources to the teacher, workbook and online. Also they encourage learners to seek each other's help first before asking tutor.

One respondent said, "I highlight and notice good practice team behaviour such as turn-taking, listening and valuing others' opinions."

Commentary

The researchers noticed that good teachers model collaboration and good teamwork – for example, making eye contact with all learners, inclusivity, making sure all have a chance to speak – directing questions to those who don't usually speak up. They build a team culture, so learners act the same way and become self-managing – all preparation for the workplace environment.

Self-management

In the context of our research, we considered this attribute as likely to include:

> *Arriving at work or class on time; wearing the right clothing and having right equipment; noticing how my words and actions can affect others; showing commitment and responsibility; being dependable; following instructions and completing tasks; following health and safety guidelines good work habits; planning and organising; showing initiative; emotional intelligence (self-awareness).*

In the words of one respondent: "The boss expects you on time, no excuses."

Broadly, teachers were *observed* by researchers *explicitly* developing course structure and processes to promote self-management; for example, part of a course is self-directed; late assignments (without approved extensions) are penalised to encourage timeliness and model 'real world'

implications of late delivery of a project or job. Teachers set standards in the classroom to model industry standards and expectations, making these explicit; for example the use of a mind map posted on a wall with content related to positivity, consistency, sincerity, effective time management, organisation and readiness to learn.

Some examples observed:

- Instruction from a teacher: “Start from the top, one task at a time, then you’re not running all over the problem.”
- During an assessment briefing: “Get Section 3 finished, go do it."
- Question time is incorporated into lessons: Talk in-class about "10 minute" routine changes outside class, such as, “Who read for 10 minutes last night, who got up 10 minutes earlier?”

When prompted to describe how they *implicitly* foster this skill, teachers said they build self-management into assessments; for example, a Time Management assessment is designed to teach prioritisation and task completion skills.

One respondent said, “I redirect them when necessary, and help them to connect the need to complete the task to workplace realities or to the purpose of the activity.”

Commentary

The responses indicate that building up these self-management skills is not left to chance. Good teachers provide structure and instructions to help learners self-manage. Where possible they let learners figure it out for themselves and take responsibility. They discover for themselves, for instance, if they have not allowed enough time for all the stages of a project. Good teachers encourage learners to take responsibility for checking their own work; for example, before they leave the session the learners submit work electronically and then check that the tutor has received it and that files are accessible using the “D.C business model” (double check) idea. These are skills with immediate transferability to the workplace environment.

Willingness to learn

The project team defined this attribute as:

> *Being willing to learn new tasks, skills and information; being curious and enthusiastic about things; looking for opportunities to improve or to help; accepting advice and learning from feedback.*

“I ask learners to rate their personal comfort as we study a given topic, offering them three options: ‘I'm OK - I'm swimming - I'm drowning’ then adapt my teaching accordingly" [Respondent].

Broadly, teachers were *observed* by researchers *explicitly* encouraging their learners to ask questions instead of giving them answers. They let learners see if they can work it out and/or help each other out. They allow leaders to emerge.

When prompted to describe how they *implicitly* foster this skill, teachers said they recognise that learners have different motivations, so they say they try to make the environment enjoyable. Also, they use learner questions as prompts to discuss ‘real world’ scenarios. Many teachers share examples from their own learning experience with learners, saying, “This is how I tackled it.”

One respondent repeated to learners, “This is why we are doing these tasks in class.” This teacher explained that “I take this onto myself because many international learners don’t question why we are doing something. I say ‘You need to be working at this speed because you won’t have the opportunity to do it slowly [in industry]’.”

Commentary

The responses indicate that willingness to learn is a core element to successful learning. Motives may be *externally* imposed, that is, you *need* to learn this. Or *internal* to the learner, who might say "I *want* to learn this". Therefore, it is valuable to outline for the learners the context for learning activities, so they can appreciate the relevance of the activity to their learning and their future in the industry. Good teachers purposefully encourage the want/need dimensions of a particular element of study. For example, a tutor was observed saying, "To be an effective employee, understanding this [form] both for work jobs and for keeping track of your own earnings and tax, is really important".

Thinking skills (problem solving and decision making)

This attribute was described as including:

> *Considering all the options before making a decision; seeing problems and trying to solve them; thinking before acting; thinking about consequences before I act; knowing when I need help; literacy and numeracy skills; resourcefulness.*

Broadly, teachers were *observed* by researchers *explicitly* allowing the use of the internet, auto databases and parts catalogues to research and find solutions. They used case studies and scenario-based learning to encourage learners to draw up solutions or make decisions; for example, a classroom or lab is set up as 'The Business Centre' with a front-of-office/ reception area and a meeting area to simulate the business workplace. The learners role-play the receptionist role and simulate a team meeting every week where they learn front-of-office and meeting management skills. As one respondent said: "I encourage my students to understand the *process*, not just focusing on the *output* of an activity."

Use of project-based teaching and learning was a common strategy. In addition, the teachers used real-life situations where possible, sometimes teaching material that was not in the assessment but that learners would need in real-life employment.

An example observed:

- Helping the learners to understand rules and regulations of a classroom, workshop, or an institution - learners were given policies and procedures (for example, business attire, health and safety) during simulation exercises for them to understand, reflect on and apply in practice.

When prompted to describe how they *implicitly* foster this skill, teachers said they focus on getting learners to think for themselves, and don't spoon feed. One said, they'd rather be known as the tutor who just sits down and waits. Instead of answering a question they use prompts to help learners find the answer.

Another respondent said, "I allow learners to contribute their own strategies for solving problems, for example, throw out challenges rather than instruct."

Commentary

The responses indicate that it is important to try to tap into the transferable skills that the learners already have. In good teaching practice, providing opportunity for peer feedback and feedforward during in-class exercises is always valuable when developing skills for employment.

Resilience

This may include:

> *Adapting to new or changing situations; not giving up when there is a setback; getting help when I need it; accepting my mistakes and learning from them; flexibility.*

Broadly, teachers were *observed* by researchers *explicitly* teaching skills for managing conflict by in-depth exploration of causes and approaches to resolution. They use storytelling, sharing experiences (including tutor's own) about when things go wrong in the workplace, and draw on others' experience too: "I encourage learners to use their own life experiences during the lesson and acknowledge when a 'good' question is asked" [Respondent].

Teachers consciously provide a non-bullying and safe environment for learners where a 'can-do' attitude can be developed and where making mistakes is part of the learning process. In one setting, a whanau group support process is in place, to review assessments and construct individual action plans for learning and assessment success. They adopt a 'warm-but-demanding' philosophy which helps build trust and resilience in learners, and model looking for solutions, listening and offering suggestions where appropriate.

Examples observed:

- An in-class exercise where learners create a plan for acquiring a job in industry.
- Modelling resilience: teachers taking responsibility for their own mistakes with humour and suggesting learners use an alternative resource to access correct information.

When prompted to describe how they *implicitly* foster this skill, teachers said they continue to encourage a learner several times and by using different words to keep trying to resolve the problem. For example, encouraging learners having technology difficulties with software to keep working at it.

One respondent said, "I do not fix the problem for the learner and instead I use the technique: "What do you think?", "Why is that the answer?" Get them to think of alternatives."

Commentary

The responses indicate that building and teaching resilience uses cumulative skills and topics. It is common to refer back to work already covered when preparing for a particular session. Good teachers encourage learners to work to their strengths and identify where they might need support and resources, and work out where to source these. This in turn prepares them for the challenges of the workplace.

Innovation

In this context, we defined innovation as:

> *Shows invention when applying processes; encourages fresh thinking; attempts new ways to solve problems; shows creativity; discusses alternative options; use of and confidence with technology.*

Broadly, teachers were *observed* by researchers *explicitly* fostering innovation by using case studies from industry and business to share and showcase new ways to address issues in a discussion, and prompting learners to provide alternative solutions and be creative. Some encouraged discussions of examples from around the world, not just local – how are other countries approaching these issues? What are different perspectives on this issue?

One example observed:

- Personally assigns learners a mini-teaching session about a topic e.g. a social issue they have investigated. Or table a statement and have students question and discuss their assumptions: "Doctors are the ambulance at the bottom of the cliff. Plumbers help keep people healthy by creating healthy homes." [Respondent].

When prompted to describe how they *implicitly* foster this skill, teachers said they show, not tell, the innovation message. They use a range of technologies in classroom activities – not as a feature in themselves but as a tool to deliver the learning in engaging and learner-friendly approaches.

One respondent tends to use 'outside-the-box' analogies and associations other than what has been introduced previously; for example, television to explain colour blindness.

Commentary

The responses indicate that innovative approaches are effective for additional skill development when aligned to the curriculum content. Encouraging learners in innovative thinking means making new connections across subjects, relating to a wider range of topics and developing relevance and application of fresh ideas. This in turn prepares them for the demands of the workplace.

Entrepreneurship

The team defined this attribute in relation to employability skills as likely to include:

> *A persuasive manner and style; demonstrating ways to find solutions; discussing the effects of alternative approaches; challenging status quo; encouraging buy-in from others to a particular perspective.*

Broadly, teachers were *observed* by researchers *explicitly* modelling persuasiveness and salesmanship. They were active and applied solutions in practical situations, demonstrated thinking outside the square, met deadlines, and reflected other attributes, for instance, resilience, self-reflection and self-management. They demonstrated knowledge of employability information, used correct terminology, made reference to stakeholders, and held career planning discussions. They prompted questions on further study and career opportunities and understood information related to literacy and numeracy skills.

When prompted to describe how they *implicitly* foster this skill, teachers said they demonstrate resilience, manage stress, encourage others, recognise rules and behaviour, explain, allow mistakes, encourage questions and are active listeners. They use persuasive strategies, seek feedback, ask relevant questions, and they are organised. They role-model communication and professionalism, and importantly demonstrate a sense of humour.

Some examples observed:

- Modelling teamwork and decision making, leadership, and meeting deadlines
- Modelling roles of supervisors, setting rules and problem solving
- Paying attention to individual needs, managing stressful situations, implementing peer learning, officiating groups, and has a sense of humour.

Commentary

The responses indicate that learners' employability skills relating to entrepreneurship will be encouraged when teaching practices are embedded with opportunities for self-reflection, self-management, independence, applicability (theory to practice), feedback and recording progress. This in turn prepares them for the workplace environment.

Cultural competence

The research team considered this attribute may include:

> *Acknowledges differences; attempts to say students' names correctly; allows for different ways of working; acknowledges and embraces diversity; welcoming contributions of others; invites cultural contributions*

This attribute is exemplified in one respondent's statement: "I create opportunities and encourage learners to bring their voice and cultural experience to the learning space."

Broadly, teachers were *observed* by researchers *explicitly* validating expectations of cultural competencies for employees in both a New Zealand-wide context and industry-specific context. Diverse cultural perspectives and increased cultural awareness were nurtured through diverse teaching and learning strategies, for example, guest speakers, role play, visual resources and storytelling.

Some examples observed of integrating tikanga Māori processes and Māori pedagogies into teaching practice included:

- Use of karakia and waiata
- Inclusion of whakawhanaungatanga (connections activity)
- Employing poroporoaki (closure and farewell)
- Shared kai
- Tuakana-Teina (peer teaching)
- Ako (teacher as learner and learner as teacher).

When prompted to describe how they *implicitly* foster this skill, teachers said they validate diverse cultural contexts, engage learners to share their personal stories and experience, and share diverse cultural stories. They use Te Reo Māori as a regular part of teaching practice, both for generic language associated with and relevant to teaching and learning; for example, greetings, feedback, ako, kōrero, mahi), and for subject-specific terminology.

One respondent said, "I model cultural competence in communications, attitudes, choice of diverse learning activities and resources. I include course content that reflects cultural diversity."

Commentary

The responses indicate that teachers can make active links between diverse cultural perspectives and industry. It is worth noting that 'culture' involves more than just ethnicity, but also a myriad ways groups operate with shared values, beliefs, behaviours and attitudes which are learned. The teacher and learner each bring their own cultures to the learning context, and together they form another one. The processes that make this happen are strongly established, guided and maintained by the teacher for the purposes of ensuring successful learning experiences for the learners. This in turn prepares them for the demands of a contemporary, multi-cultural and diverse workplace.

Discussion

The sections above consider responses to the observations and subsequent interviews, skill by employability skill. Each commentary section summarises the research team's analysis of these explicit and implicit data to identify core learnings about the behaviours and practices good teachers are adopting to embed employability skills and work readiness into their programmes. In every skill set area outlined above, the approach is one of integrating soft skill development with subject matter, as advocated by numerous commentators, including McEwen (2010) and Cranmer (2006). Explicit and deliberate links were being made by teachers between learning activities and

employability, so that recognising and adopting these was a conscious act by the learners, as advocated by Green and Blaszczynski (2012).

Our observations and collation of respondent feedback from interviews indicated a high level of congruence with the literature in other areas, too. Many of the examples offered in the previous section show the four types of learning approaches which Kemmis and Hodge (2014) see as best suited for developing employability skills in context with technical skills: responsible learning; experiential learning; cooperative learning; and reflective learning. Teachers are applying creative thinking to devise activities and challenges in which employability skills are given value equivalent to that of hard skills (Gerstein & Friedman, 2016; Simona, 2014). They are talking to their students about innovation, entrepreneurship and resilience, meaning that they are trying to prepare students for an unknown future, with the skills required not only for the workplace of today, but that of tomorrow as well. From what our team observed of good teaching practice across a range of vocational disciplines, we believe that we have the knowledge foundations to develop graduates who are, as the literature calls for, "work-ready plus" (Scott, 2013).

Based on our analysis of the observations and interviews carried out, and our review of the key threads identified in the literature, the project team progressed two strands of work. First was the *Guidelines*, accompanied by a series of transferable strategies available online, as a contribution to colleagues across the VET sector. These are available from a link on the Ako Aotearoa website's project page. Second, we reflected 'internally' on our team process, conducting a self-evaluation of the effectiveness of our own collaboration, as a large, inter-institutional project team.

Recommendations and guidelines

As described above, our first project outcome is the set of *Guidelines* which emerged from this investigation into ways to embed teaching strategies that enhance employability skills in graduates in the vocational sector.

These *Guidelines* provide a direct way for tutors to explore and directly apply proven strategies currently being employed by excellent teachers in a variety of contexts. Where a given method or teaching approach is not directly relevant to another context, then a tutor could take the general idea behind the practice and modify it to suit their own context.

The *Guidelines* are supported by a series of practices or strategies selected from the extensive data collected and used as exemplars. These have been collated and revised by the research team and posted onto the project space on the Ako Aotearoa web site https://ako.ac.nz/knowledge-centre/teaching-strategies-that-build-employability/ or more directly at https://sites.google.com/view/employabilityskills

They are too numerous to be listed in this document, but provide an extensive collection of ideas for teachers to pick and choose from, to suit their own context, their students, and their preferred teaching style.

Evaluating the team's collaboration as a community of practice

Our second work stream was a self-evaluation of our own team process. This project was conducted by a group of twelve researchers from seven institutions. For us, the project has been a professional development activity in itself. A positive outcome of this project was a meeting of minds amongst the project team. It has offered us a chance to build collaboration and collegiality, which are part of the objectives for the project. Two specified objectives for the project were:

- To build collaboration amongst the project research team.
- To provide a task for the Ako Aotearoa Central Hub to meet and build members' collegiality.

It is appropriate to reflect on the process of collaboration and ways of working collaboratively. The project is part of the work of the Central Educational Developers group which has been meeting regularly for two years. Our previously published research was *Designing professional development for experienced teachers in tertiary vocational education* (2016). The project team decided to evaluate its own progress as a community of practice in three ways. Firstly, to determine whether it meets the criteria for being a 'true' collaboration; secondly, how well it has met the criteria for 'successful collaborative relationships'; and thirdly, to consider the 'value creation' of learning achieved through working together in a community of practice.

Self-evaluation of project as a 'true' collaboration

The research team believe that we can claim that this project meets the criteria for a true collaboration, as described in the *ITP Sector Collaboration Practices Project* (Whittle, Bodkin-Allen, & Hoffman, 2015). The writers state:

"Drawing on the literature … a collaborative relationship needs to have a number of key attributes. A collaboration:

- Is mutually beneficial
- Is aimed at achieving a common goal or shared purpose
- Involves the sharing of resources and joint decision-making
- Relies on collective responsibility
- Offers mutual benefits for partners (p. 5)."

The project meets these criteria.

Self-evaluation of 'successful collaborative relationships' amongst the project team

Next we evaluated how well this project met the *ITP Sector Collaboration Practices Project's* (Whittle et al., 2015, p. 80) range of suggestions for what requirements apply to successful collaborative relationships. We used these for our self-assessment for this project. (Examples of how they apply can be viewed below in the section 'Self-assessment of the value creation in this community of practice).

Accordingly, we asked ourselves, were the criteria 'well met, partially met, not well met?' and decided:

Well met:

- Enabled institutions to maintain their independence within the collaboration
- Distributed the work fairly among partners
- Had a clear shared goal or purpose
- Was made up of cooperative and highly engaged partners
- Involved face to face contact with external partners at least occasionally

- Involved partners with similar values or compatible ways of working
- Was able to adapt to changing conditions
- Was one where partners had a clear sense of their roles and responsibilities.

Partially met:

- Maintained a sense of equality and equitable access to information and decision-making responsibility
- Shared resources and costs fairly.

Not well met:

- Had some informal contact with external partners outside of organised meetings.

Overall, we are confident that the two objectives for the project were largely met because, firstly, it continued to build collaboration amongst the project research team; and secondly, it definitely proved a valid and viable task for the Ako Aotearoa Central Hub to meet and build members' collegiality.

Self-assessment of the value creation in this community of practice

Etienne Wenger and colleagues have developed a framework for assessing *value creation* in communities of practice and social networks. By value creation they mean;

> … the value of the learning enabled by community involvement and networking. Therefore we focus on the value that networks or communities create when they are used for social learning activities such as sharing information, tips and documents, learning from each other's experience, helping each other with challenges, creating knowledge together, keeping up with the field, stimulating change, and offering new types of professional development opportunities (Wenger, Trayner & de Laat, 2011, p. 7).

The framework proposes five cycles. To paint a more reliable picture of how this community of practice is creating value, it is necessary to follow value creation across cycles. Each cycle of value creation suggests a series of questions to investigate, as a way to reflect on the value that communities and networking produce.

Table Three: Value creation cycles in a community of practice

Cycle	Value	Concept	Example questions
1	Immediate	The most basic cycle of value creation considers networking / community activities and interactions as having value in and of themselves.	What happened and what was my experience of it?
2	Potential	Activities and interactions can produce "knowledge capital" whose value lies in its potential to be realized later.	What has all this activity produced?
3	Applied	Knowledge capital is a potential value, which may or may not be put into use. Leveraging capital requires adapting and applying it to a specific situation.	What difference has it made to my practice / life / context?
4	Realized	New practices or tools are not enough, even when applied. One would expect the application of new ideas to practice or the use of resources from the	What difference has it made to my ability to achieve what matters

		community/network to result in improvements in performance, but this is not guaranteed.	to me or other stakeholders?
5	Reframing	The last cycle of value creation is achieved when social learning causes a reconsideration of the learning imperatives and the criteria by which success is defined.	Has it changed my or other stakeholders' understanding and definition of what matters?

To inform our self-evaluation each member of the project team wrote a short (200 word) personal narrative about their experience of the Central Educational Developers (CED) group during this project. Our stories are considered together "to build an overall robust picture of the value creation within the group" (Wenger, Trayner & de Laat, 2011, p. 7).

There was universally positive endorsement of the experience and the learning done as part of the CED. This was best summed up by one member writing, "Every educator should have the privilege of contributing to and harvesting from a community of practice like the CED Group."

Some of the comments, grouped under the cycle headings, are included below. We have elected to use team members' initials to emphasise that the comments included here were representative of the whole team, and not solely contributed by one or two members.

Immediate value: *So that the activities and interactions between members have value in and of themselves.*

- The CED group has shown a professional community at work and the project has given a focus to those involved, with people given tasks and responsibilities. SH
- Having a focus, with assigned roles, tasks and responsibilities keeps us all connected, and the outcomes which we all share in are substantively improved – in quality and scope – than any we would be achieving individually – if at all! CF
- They provided me with … the opportunity to network and learn about challenges, solutions, and initiatives in other ITPs. KR
- This demonstrates everyone's level of professionalism, tenacity and adaptability, cooperation and willingness to contribute to the team, qualities that make for an effective project team. LS
- Members of the group took on responsibilities that they had strengths in or teamed up with others to get tasks done. AW
- The divergent perspectives within the group was valuable as we all came from different backgrounds and professions. AR
- The CED group strengthens and affirms my belief in myself as an educational developer. It exposes me to different thinking, new ways of doing things (esp. research), alternative leadership and facilitation styles. DS

Potential value: *Namely, the activities and interactions of immediate value may has potential to be realized later.*

- It gave me a chance to observe my own colleagues in action and pick up a few more ideas I could use in my own teaching. LS
- I am solely responsible for this in my organisation, therefore having access to others in similar roles is incredibly enriching and develops my own professional practice. KR

- Personally, and professionally, it has enhanced, learning and confidence, and a strong sense of satisfaction. AR
- The CED group has worked well as a mechanism to sustain a professional community. CF

Applied value: *In which knowledge capital may or may not be put into use. It requires adapting and applying it to a specific situation.*

- The work was challenging, inspirational and useful. Members value sharing responsibilities within projects, each person working to their strengths. GD
- They [team members] provided me with valuable support and mentoring throughout. KR
- [The CED] has showcased leadership in Communities of Practice-building long term inter-institutional relationships; including co-authoring, co-teaching and co-presenting. AR
- It was clear that members understood the benefits of working collaboratively and recognised the value for both team and stakeholders. AW
- It has given me insight into the important work done by Ako Aoteoroa on a national level. AR

Realized value: *Whereby it is important to find out what effects the application of knowledge capital is having on the achievement of what matters to stakeholders.*

- It has improved collaboration in research areas, thus enhancing institutional quality management systems. AR
- I believe this models the kind of adaptability that is essential in leading project teams made up of diverse people. LS
- This experience has positively modelled how a community of practice can thrive around shared projects, an experience I am sharing as using as a guide with my own geographical group, the Southern Educational Developers (SED). KR
- It was refreshing to get others' perspectives. This was in part due to the wide cross section of cultural backgrounds and fields of expertise of the group which created some stimulating conversations and produced results more efficiently, AW
- This is another essential in teamwork – having fun and serving as a complement to each other. LS
- The benefits for me were much broader than the project outputs. DS

Reframing value: *This happens when learning causes a reconsideration of how success is defined. It includes reframing strategies, goals and values.*

- [the project] would contribute to a bank of academic knowledge (information and resources) that we could take back to our own ITP's and share with educators nationally. DS
- The feedback from other members has introduced me to new ways of thinking on assessment moderation and teaching. SH
- Learning about others' workplaces, challenges and responses is an excellent way to keep abreast of our rapidly changing higher education environment, to identify new opportunities for my own setting, and share initiatives that have worked, but news of which may not have made its way so far afield. CF
- The CED team is evidence of the many benefits of inter-institutional collaboration. AR

In summary, as one member [Deb Stewart] put it, “The CED has provided a forum for building and maintaining meaningful relationships with educational developers from other ITPs and extending our professional networks.”

Conclusion

In an environment of rapid change – technologically, politically and economically - knowing how well Institutes of Technology and Polytechnics (ITPs) prepare learners for the working world is more than just important, it is essential. This research project looked at how experienced teachers are currently embedding ways of enhancing employability of their students. By linking the project to international initiatives (e.g. Kinash, 2016), a wide literature about employability, work-readiness and preferred graduate attributes, and existing New Zealand frameworks (e.g. CareersNZ, 2017), we have endeavoured to provide a strong foundation to the investigation described in this report. By garnering case studies and examples from 23 teachers across seven organisations and multiple disciplines, we can now offer recommendations for good practice that are relevant and applicable across the sector.

The research question which guided this inquiry (and has remained unchanged since the original application) was: *How are teachers in Institutes of Technology and Polytechnics embedding employability skills into their teaching practices?* The answer is that they are doing this both explicitly and implicitly, using a myriad of approaches and strategies which fit seamlessly within their delivery of core curriculum content. Further, they are creating activities and developing ideas which in most cases, are readily transferable to other contexts and subject areas.

At the beginning of this report, we outlined the team’s four objectives, re-stated here for easy reference:

- To provide qualitative information from good teachers about the overt and covert strategies they used in the classroom to develop learners’ work-readiness skills, alongside curriculum content
- To report this in a framework which aligns to national strategies, such as the ‘Employability Skills Framework’ (Careers NZ, 2017), and large studies of desirable graduate attributes reported in the literature, such as Scott, et al. (2008) and Scott (2013).
- To build collaboration and capability amongst the project research team, as this project includes both members from a previous inter-institutional Ako Aotearoa Hub-funded project, and new members
- To establish a task for the Ako Aotearoa Central Hub to meet and build members' collegiality.

The first two objectives have been met in the main output from this resource: a set of online *Guidelines* and examples, drawn from observed practice and teacher contributions. These are presented under ten category headings, taken from the ‘Employability Skills Framework’ (Careers NZ, 2017) and extended by the project team to include additional skills deemed critical to meet the challenge of employment in future workplaces, and roles which as yet do not exist. Hence, the Guidelines offer authentic and transferable teaching ideas to address the development of ten industry-based work skills: *positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience, innovation, entrepreneurship* and *cultural competence.*

The third and fourth objectives are internally-focussed, seeking to build participants’ professional capability and capacity, to grow synergies, and to enhance job satisfaction. The project team members have purposively and mindfully developed a Community of Practice, and paid close attention to process as well as outcomes. Using two frameworks (Wenger et al., 2011; Whittle et al., 2015) we determined that significant value creation had occurred across the full range of framework domains: *Immediate; Potential; Applied; Realized;* and *Reframing*.

Encouragingly for the team, and for colleagues across the sector, our discussions have generated a number of future directions we believe could be developed beyond this initial project. In the future, the team felt, there is definitely potential to explore in greater depth, ways of teaching and building on the findings of the research with particular reference to embedding good teaching practices related to building employability skills in learners.

Further, in addition to this report, and the online *Guidelines* resource, a later project may lead to creating future multimedia resources, such as videos of teachers performing an authentic practice that fosters employability. One example from a team brainstorm was that of a carpentry tutor explaining the need for an apprentice to self-manage, or how to be accurate because other tradespeople rely on your measurements or quantities, or how to listen and communicate well (elements identified by BCITO, 2017 as desirable industry skills). The video could include the teacher explaining how s/he nurtures and reinforces the skills.

A final point here is that data collection was limited to teachers, and what they do. Further research could consider students' perceptions of the effectiveness of explicit and implicit instruction and consciousness-raising about work-readiness skills, both before and after graduation, or in first destination employment. Feedback and review from employers would also be highly relevant and extend the value of these results reported here, still further.

Further research using similar questions and objectives undertaken on Degree related programmes in the non-university sector would be of value.

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Appendices

Appendix A – Classroom observation and follow-up interview form

Teacher participant name		Observer name			
Programme name		Course title			
Topic focus this session		NQF Level[1]		Credit value	
Length of total time teaching in any tertiary institution(s)	<5 years 5-10 11-20 >20 *years*	Date		Time	
Institution	(*circle*) Toi Ohomai EIT Wintec WelTec Whitireia NMIT Taratahi				
Length of observation	30 60 90 120 mins	Session type	Classroom, tutorial, lab/workshop, lecture, field trip, one-on-one f2f, online		
Notes about session, student cohort, context of session					
What to include	Write in the comment boxes what you as observer saw during the session, i.e. capture 'evidence', namely ways the teacher was aiming to enhance employability skills through teaching strategies. The focus is NOT on what the students do or say, but rather the teacher's strategies. Strategies may be either overt or covert. For example, the teacher overtly made a comment about an activity, linking it to a particular skill(s) needed for the workplace. Otherwise, they may covertly or perhaps indirectly encourage a skill(s), by embedding it in the teaching and learning practice. For example, they build teamwork into the learning design.				

[1] **Only** include New Zealand Qualifications framework course Levels 3 - 5

Employability skills fostered by the tutor	***Evidence*** *What strategies does the teacher use to enable or encourage this skill in the learners?*	
	Observed *Yes/no*	***Teacher responses*** post-observation interview
Positive attitude This may include: Having a “can do” attitude; Being optimistic; Being honest; Being friendly and showing respect; Demonstrating motivation to work hard taking initiative; ethical integrity; self-confidence; professionalism		
Communication This may include: Being aware of how my communication affects others; Asking questions ; Listening actively; Showing respect in all communications, oral and written; social skills		
Teamwork This may include: Working well with others to complete tasks; Contributing to new ideas; Working well with others of different genders, cultures or beliefs; Following the directions of my peers and seniors; forming positive relationships; developing leadership ability		

Employability skills fostered by the tutor	***Evidence*** *What strategies does the teacher use to enable or encourage this skill in the learners?*	
	Observed *Yes/no*	***Teacher responses*** post-observation interview
Self-management This may include: Arriving at work or class on time; Wearing the right clothing and having right equipment; Noticing how my words and actions can affect others; Showing commitment and responsibility; Being dependable; Following instructions and completing tasks; Following health and safety guidelines good work habits; planning and organising; showing initiative; emotional intelligence (self awareness)		
Willingness to learn This may include: Being willing to learn new tasks, skills and information Being curious and enthusiastic about things Looking for opportunities to improve or to help Accepting advice and I learning from feedback		

Employability skills fostered by the tutor	***Evidence*** *What strategies does the teacher use to enable or encourage this skill in the learners?*	
	Observed *Yes/no*	***Teacher responses*** post-observation interview
Thinking skills (problem solving and decision making) This may include: Considering all the options before making a decision; Seeing problems and trying to solve them; Thinking before acting Thinking about consequences before I act; Knowing when I need help; literacy and numeracy skills; resourcefulness		
Resilience This may include: Adapting to new or changing situations; Not giving up when there is a setback; Getting help when I need it; Accepting my mistakes and learning from them; flexibility		
Innovation This may include: Shows invention when applying processes; Encourages fresh thinking; Attempts new ways to solve problems; Showing creativity; Discusses alternative options; use of and confidence with technology		

Employability skills fostered by the tutor	***Evidence*** *What strategies does the teacher use to enable or encourage this skill in the learners?*	
	Observed *Yes/no*	***Teacher responses*** post-observation interview
Entrepreneurship This may include: Persuasive manner and style; Demonstrating ways to find solutions; Discusses the effects of alternative approaches; Challenges status quo; Encourages buy-in from others to a point of view		
Cultural competence This may include: Acknowledges differences; Attempts to say students' names correctly; Allows for different ways of working; acknowledges and embraces diversity; welcoming contributions of others; invites cultural contributions		

INTERVIEW NOTES – A
What do you think employability skills are in your context?
Where do you consciously, purposefully teach Employability skills? For example, those named in the Graduate Profile for this programme. **Unprompted** (*do not show checklist)*
Interview notes – B
Where do you usually embed in your teaching strategies to enhance the skills on the Employability Skills checklist? **Prompted** *(Show teacher participant the checklist)* **GO TO PAGE 2**
Interview notes – C
Please think about the need for teachers enhance employability skills in their learners. In your opinion, what would assist you in this area?
Any final comments and suggestions about the research question: *How are teachers in ITPs embedding employability skills into their teaching practices?*

Appendix B – Information and consent forms

Identifying authentic teaching strategies that build employability skills of vocational education graduates.

INFORMATION FOR PARTICIPANTS

Thank you for your interest in this research project. This information is provided so that you can make an informed decision about participating in this study.

This project is being undertaken by Gerard Duignan, Senior Advisor, Capability Development and has been approved by the Ethics and Research Committee.

As a teacher at [*WelTec and Whitireia*] you're invited to participate in a research project being conducted at eight institutes of technology and polytechnics. We want to identify ways in which employability skills are embedded in learning and the role the teacher can play in enhancing them.

We would like your consent to observe you teaching a regular class, then ask you some questions afterwards related to employability skills. We'll collect examples of good teaching practices in this area from all the institutions then produce resources for wide distribution across many programmes.

About the project:

The aim is to identify how teachers in ITPs embed in teaching practices ways to enhance employability skills, such as those identified by employers, including *positive attitude, communication, teamwork, self-management, willingness to learn, thinking skills, resilience, innovation, entrepreneurship*.

Your participation is voluntary and will not in any way affect your employment terms and conditions. Your responses to questions and examples of good practice may be attributed to you amongst the findings of the project. No disadvantages or negative consequences are foreseen.

You will be able to view progress and the final report and resources at www.akoaotearoa.ac.nz A workshop will be held at the National Tertiary Teaching and Learning conference at Unitec, Auckland, 2-3 October, 2017 to report on the project.

The research data will be used only for the purpose for which it has been collected. Responses will be stored at the above participating institutions, available only to members of the project team. Raw data will be kept for five years, then destroyed. By agreeing to take part, and signing the consent form (on the back of this page) you will be accepting the terms of the project.

This research project is being led by Gerard Duignan of Capability Development WelTec and Whitireia with a project team including:

John Hitchcock and Gerard Duignan (WelTec)

Janet Walke (UCOL)

Carmel Haggerty and Agustilia Rodriques (Whitireia NZ)

Scott Casely and Deb Stewart (Eastern Institute of Technology)

Kate Ross (NMIT)

Beverly Taylor (Wintec)

Stephen Hannam (Taratahi Agricultural Training Centre).

Cath Fraser, Brian Dillon and Malcolm Hardy (Toi Ohomai Institute of Technology)

If you have any questions about this project, please contact: Gerard Duignan 04 830 0144 - 027 265 6085 or gerard.duignan@weltec.ac.nz

Ngā mihi nui [Gerard Duignan] < or *team member's own name …!* >

on behalf of the Project Team

Identifying authentic teaching strategies that build employability skills of vocational education graduates.

CONSENT FORM

I have read the Information Sheet (over) about this research project and understand the information provided. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I understand that:

1. My participation in the project is voluntary;
2. I am free to withdraw from the project at any time up until the observation begins; and I can withdraw the information provided, without any consequence;
3. I can withdraw the information provided, within one week of the interview, without any disadvantage or consequence;
4. I am consenting to the observation of teaching a regular class and my interview afterwards being recorded;
5. Any raw data on which the results of the project depend [for example, audiotapes, paper questionnaires] will be kept in secure storage for five years, after which it will be destroyed;
6. The information I will give will be used only for this project;
7. If I experience any emotional or physical discomfort, due to the nature of the topic, while participating in this research the project team will provide assistance and/or refer me for assistance;
8. I will not be paid for my involvement in this project;
9. The results of the project may be published and available online at www.akoaotearoa.ac.nz and I may be identified in relation to examples of good teaching practice for enhancing employability skills within learners.

(Signature of participant)

(Name) (Date)

(Signature of Researcher)

(Name) (Date)

Any concerns can be directed to Project leader, Gerard Duignan 04 830 0144 - 027 265 6085 or

gerard.duignan@weltec.ac.nz OR Manager Research and Innovation, Dr Ashok Parbhu.

This project has been reviewed and approved by the Ethics and Research Committee.