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Karsten E. Zegwaard
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New Zealand Association for Cooperative Education 2014 Conference Proceedings

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Building Institutional Capacity to Enhance Access and Participation in Work-Integrated Learning (WIL)

MATTHEW CAMPBELL

Queensland Institute of Business and Technology, Brisbane, Australia

JACQUELINE MACKAWAY

Macquarie University, Sydney, Australia

DEBORAH PEACH

Queensland University of Technology, Brisbane, Australia

KERI MOORE

Southern Cross University, Gold Coast, Australia

SONIA FERNS

Curtin University, Perth, Australia

THERESA WINCHESTOR-SEETO

Macquarie University, Sydney, Australia

The diversity of the student population within Australian and New Zealand universities has changed dramatically across recent decades due to greater focus on policies of social inclusion, widening participation and the massification of higher education (Leach, 2013). At the same time there has been a movement towards increased student participation in work-integrated learning programs, with some universities (see for example Griffith University, Flinders University, and Victoria University strategic plans) setting requirements for all programs to have some form of work-integrated learning opportunity. Work-integrated learning opportunities have been shown to be beneficial for students seeking graduate employment (Jackson, 2014), improving student retention and academic performance (Gamble, Patrick, & Peach, 2010) and for guiding the development of professional identity (Campbell, 2009). A disconnect exists, though, between the benefits of work-integrated learning and the capacity for diverse student populations to fully access, participate and engage with these opportunities. This paper presents an exploration of this challenge for higher education outlining an argument for the further exploration of these.

THE VALUE OF WORK-INTEGRATED LEARNING

Critical to the success of students transitioning from university to the workplace is the development of well-developed generic capacities going beyond traditional disciplinary boundaries of skills and knowledge. This presents a challenge to universities to design and deliver curricula to meet these expectations (*Higher Education Base Funding Review: Final Report*, 2011). WIL plays an important role in the education-to-employment transition of students. WIL can lead to positive results for students in preparation for the workplace, access to employment and broadening perspectives of career and life possibilities (Smith, Torjul, Brooks, Tyler, & McIlveen, 2009). WIL is instrumental in the realisation of graduate outcomes and the development of graduates who are responsive to the 'real-world' through the application of theoretical knowledge to authentic situations (Patrick, Peach, & Pocknee, 2009). Participation in WIL can also open up new opportunities and future employment for students from diverse backgrounds by leveraging the social and cultural capital of the university (i.e., by working in partnership with professional bodies and industry WIL enhances opportunities for all students) allowing students access into previously inaccessible professional worlds (Jackson, 2014). However, WIL practices that lack flexibility and are not underpinned by principles of inclusive practice can exacerbate disadvantage (Orrell, 2011; Patrick et al., 2009).

UNDERSTANDING INCLUSIVE EDUCATIONAL PRACTICE

For the past twenty years the education sector in both Australia, and a range of other countries, has been guided by an equity policy framework and a view that education should be inclusive, providing *all* students with a meaningful experience (Hockings, 2010; James et al., 2008). In recent times, particularly since the Bradley Review (2008), Australian higher education has been challenged by increased diversity of student cohorts, larger student populations and a widening participation agenda that has introduced the possibility of higher education attainment to broader cohorts. Subsequently inclusive education, within the context of higher education has moved beyond the single idea of access, or the view of 'just get disadvantaged students through the door', to regarding educational inclusion as a more complex issue, focused on successful student participation, progression and completion of studies (Hockings, 2010; James et al., 2008). The Australian higher education sector has directed considerable attention, for both social justice and pragmatic reasons, to this broader view of inclusive education.

Inclusive education, and inclusive educational practice, is not a new approach to teaching and learning. Instead it has developed over the last half-century in response to the increasing demands in education to be responsive to diverse student populations. Inclusive education intends for a movement away from the labelling of individual students around particular deficits, to an appreciation, and responsiveness, to diverse and individual needs of all students (Daniels & Garner, 1999). Underlying constructs of inclusive education are concepts of creating learning experiences that can be accessed by all students. By responding only to students with a particular label (for example impairment or particular disability) there is a tendency to ignore the other range of needs of students and also to ignore the multiplicity of disadvantage (e.g., students with physical disabilities may also come from low socio-economic backgrounds, and under-represented cultural groups). Instead inclusive education implies an appreciation of the unique diversity of all students. By adopting the deficit model of responding to diverse students, what emerges is an attempt to supplement practice with additional supports targeted to particular groups of students; a constant adding-on of resources and approaches (Kift, 2009). Instead inclusive education challenges teachers and educational providers to rethink pedagogies and practices to ensure that all students, no matter what their particular individual needs may be, are able to fully participate in all forms of education (Daniels & Garner, 1999).

Inclusive practice in higher education can be considered to be influential at four different organisational levels, namely, institutional, policy, procedural and practice, and is conceived and discussed in a range of ways including: access and equity, participation, diversity, affirmative action, disadvantage etc. Responding to more diverse student populations requires reconsiderations of classroom, as well as institutional practices, which may be grounded in constructs of a perceived normal, which is exclusionary to any student who differs to this. Within higher education there is a need to evolve new policies that inform and shape procedures and practices which make the institution, as a whole, more responsive to the needs of the whole student, re-imagining what we mean by equity and going beyond limiting equity categories (Gale, 2009). Inclusive education advocates a holistic view of students and their lives. It recognises that both a student's circumstances as well as institutional processes can influence successful engagement with higher education (Benson, Hewitt, Devos, Crosling, & Heagney, 2013). Gale (2009, p. 11) suggests a focus on the following three dimensions as a way to frame the social justice aspect of diversity and inclusive education in a more "robust" way:

- i. Students are appreciated for who they are and how they identify themselves
- ii. Opportunities exist for students to make knowledge contributions as well as develop their skills and understandings
- iii. Students are provided with genuine opportunities to shape their learning environments and experiences.

This type of framing also draws attention back to the issue of learning, and that all capable students should have equal access and opportunity to fully participate in all pedagogical strategies employed by universities, including access to WIL opportunities.

APPLYING INCLUSIVE EDUCATION TO WIL

While there is a large body of research on inclusive education, research directed to inclusive WIL is in its infancy, both in Australia and abroad. Recently, Australian WIL practitioners have begun to take the lead on revealing the scale, depth and complexity of the issue of inclusive WIL, particularly in relation to the placement model. For example, the cost of WIL to students, the role of partners and a broader conceptualisation of WIL beyond the placement model, all feature as emerging challenges and opportunities for inclusive WIL. Moore, Ferns, and Peach's (2012) review of a WIL scholarship program reveals the financial burden presented to students who want or need to undertake a placement. The location and structure of WIL, if it involves for example an extended full-time block, appears to exacerbate the financial challenges experienced by students. However, the burdens and barriers to inclusive WIL are not just located in the domain of the student.

Key stakeholders and partners in the WIL experience provide important elements of the constructed norms that exclude particular students, especially where a student does not fit within the idealised form desired by the workplace partner. Mackaway, Winchester-Seeto, and Rowe (2013, p. 3) label this issue as partner 'push back', defining this as "where a partner expresses a preference for a particular type of student to the exclusion of all others" which can make it difficult to negotiate quality placements for diverse cohorts of students. Involvement in WIL offers many benefits to organisations, including the opportunity to "screen potential employees, complete projects that would have otherwise lapsed, reduce costs of employment and training, and provide positive links with the university" (Cullen, 2005, p. 5). In advocating the agenda universities may sanction, unintentionally, an organisation's right to choose which students they offer placements to without considering the potential access and equity implications for their growing cohort of diverse students. Therefore, while the university may aspire to provide inclusive WIL, there is dependence on workplace partners sharing similar views and goals to achieve this aspiration.

Ongoing stakeholder debates over curriculum design, models of WIL, educational standards, the work-readiness of graduates and how this can be best achieved in nurse education (Nash, 2012), information technology (Koppi et al., 2013) and the built environment (Savage, Davis, & Miller, 2010). These debates reflect "a fundamental tension between the different perspectives of various stakeholders regarding the essential 'purpose' of students' [WIL] experience" (Nash, 2012, p. 7). This tension is not isolated to the industry-university stakeholder partnership, but also extends to the partnerships with students. What students bring to WIL plays a significant part in how successfully they engage with this approach to learning and teaching. Research by Carter, Winchester-Seeto, & Mackaway (2014) identifies three main student centred factors; namely, personal circumstances, personal attributes and experience with the world, which influence inclusive WIL, reflecting both the situational and dispositional nature of barriers. Responses to these student factors are also a key concern in evolving inclusive WIL curriculum models.

IMPLICATIONS AND FUTURE RESEARCH

The above discussion highlights the challenges that present in the junction between an increasingly diverse student cohort and the benefits of engagement in work-integrated learning. There is a pressing need to explore these challenges and to better understand and articulate key principles and guidelines that can better inform inclusive practices in work-integrated learning. Currently the authors are engaged in a funded project that will respond to these challenges exploring key principles and insights. Within institutions, however, there is also opportunity for localised responses to these often forgotten barriers to engagement and success in work-integrated learning.

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Stakeholder Perspectives of the Influences on Student Learning

JENNY FLEMING

Auckland University of Technology, Auckland, New Zealand

Cooperative education is positioned as a strategy that integrates the academic learning environment of the university with learning in the workplace. The aim of this research was to explore students, workplace supervisors, and academic supervisors perceptions of the influences on student learning in a sport cooperative education context. The way that learning occurs in the university is acknowledged as very different to how learning occurs in a workplace context (Billett, 2001; Peach & Matthews, 2011). University learning commonly occurs through face-to-face or virtual delivery methods, which are frequently didactic in nature. In an environment where class sizes are often large, students can remain largely invisible with minimal participation and interaction with the teaching staff or fellow students (Cooper, Orell, & Bowden, 2010). In contrast, students in the workplace are situated in a social context (Eames & Bell, 2005). Through participation in authentic activities (Billett, 2001; Rogoff, 1995) alongside their supervisor and co-workers, students learn as they become part of a community of practice (Lave & Wenger, 1991).

As Billet (2001) argues, what is learnt in the workplace and how that learning occurs is dependent on influences that are embedded in the context. Much of the research on the influences on learning in the workplace has been conducted wherein the learner was employed full-time (Billett, 2001; Eames & Bell, 2005; Eraut, 2007). While it was likely there would be many similarities, it is increasingly important to understand the influences on learning where university students are undertaking part-time, unpaid cooperative education placements. Equally important is the need to understand learning in discipline specific contexts (Coll & Eames, 2004).

CONTEXT

The context for this study was the cooperative education programme, within the Bachelor of Sport and Recreation (BSR) at Auckland University of Technology (AUT). The cooperative education programme (co-op) involved students undertaking 350 hours of placement within a sport and recreation organisation over two semesters, each of fifteen weeks. The placement was undertaken, generally two days per week, during the final year of the degree. Co-op made up half of a full-time programme of study. Students attended university classes to make up the other half of the full-time load during each semester.

Students were supported in their learning experience by a workplace supervisor (referred to in this study as an industry supervisor) and an academic supervisor. Industry supervisors were expected to negotiate appropriate work activities for the students and to provide guidance, support and feedback in the workplace. Students were expected to meet their academic supervisor on a regular basis (ideally every two weeks). The key role of the academic supervisors was to encourage students to share their reflections and to help them critically analyse these in order to make meaning from their experiences. Academic supervisors provided comments on student's online journals and feedback on assessment tasks.

METHODS

A qualitative case study approach (Merriam, 1998; Stake, 1995) was used to provide a rich description of the perceptions of the three stakeholder groups (students, industry, and academic supervisors). The primary data was gathered through the administration of qualitative questionnaires, structured using open-ended or sentence completion questions. Responses were gained from 91 BSR students, who had recently completed their cooperative education experience (response rate 79%), 18 AUT academic supervisors, (response rate 68%) and 28 industry supervisors (response rate 44%). Industry supervisors were drawn from the sport or physical education

departments in schools and a range of sport or recreation organisations, across both the non-profit and commercial sectors.

Questionnaires were administered as part of a larger study. Questions relevant to this paper focused on the stakeholders' understanding of the influences on student learning. Data was coded using QSR NVivo 9 software and analysed thematically (Braun & Clarke, 2006). Participant responses have been reported using the following codes: Students (SQ), Academic supervisors (AQ), and Industry supervisors (IQ).

FINDINGS

Stakeholders agreed that industry supervisors influenced what and how the students learnt. A major influence was the nature of the environment they provided in the workplace. The industry supervisors were there to help the student to "set goals and then assign responsibilities to achieve these goals" (IQ27). Providing "appropriate, relevant and challenging work activities" (AQ8), where students were able to develop "a sense of belonging" (AQ3), were also considered important roles of the industry supervisor. Having access to both routine and more challenging tasks with added responsibility, was perceived as important for students to be able to move from peripheral towards becoming full members of a community of practice (Lave & Wenger, 1991).

While the industry supervisor was considered responsible for providing a positive learning environment, students consistently identified workplace colleagues as having a key influence on their learning. Students commented that they were influenced by "the people I worked with" (SQ80), 'the people I met' (SQ35) and the "people around me" (SQ7). Industry supervisors agreed that students gained most when "working with experienced practitioners in a busy environment" (IQ8) and "the interaction and confidence building that came from working in a team environment" (IQ15) were important influences on learning. Developing relationships with workplace colleagues enabled the students to access procedural and dispositional knowledge from a variety of people across the workplace, consistent with the concept of 'distributed cognition' (Eames & Coll, 2010; Salomon & Perkins, 1998).

Stakeholders consistently identified that the attitude of students was a major influence on learning. As one industry supervisor commented, "the degree to which a student engaged with the environment and their willingness to learn and participate" (IQ3) was important. Academics had similar views and acknowledged that co-op learning was influenced by:

The students' own enthusiasm and pro-activeness to structure the opportunity to gain from it want they want to. So being assertive and a good negotiator is an important attribute for students to have to get the best out of co-op (AQ15).

Students also made similar comments in the realisation that their attitude, work ethic and personal motivation were important influences on learning. Students were aware that they needed to take responsibility for negotiating their own learning, through "expressing what I wanted to do and my co-op industry listening to this" (SQN34). For some students they considered that it was the end goal that was a key influence on their learning. Examples given were: "wanting to be a teacher in the future" (SQJ24), "finishing my degree" (SQN41) and "wanting to achieve a high grade and get the most out of it" (SQJ27). Learning was also influenced by "what the students are willing to do and how much trust an industry supervisor was willing to have in them" (IQ23). Industry supervisors cautioned that a student showing a positive attitude to learning was not always seen as enough. As supervisors, they needed to have confidence that the students had the skills and professionalism necessary to undertake the tasks they were being assigned.

Stakeholders acknowledged academic supervisors as being an important influence in the learning process, through the support and guidance they provided. Students clearly identified the specific role that academic supervisor played in developing their reflection skills. Students confirmed that it was their academic supervisor "pushing for more critical analysis" (SQN28) that helped them learn. Academics recognised that it was the students "ability to reflect" (AQ9) that influenced their ability to learn from their cooperative education experiences.

DISCUSSION

The stakeholders perceived that industry supervisors had a major influence on supporting student learning and these findings are consistent with what is expected of a supervisor's role (Billett, 2001; Cooper et al., 2010; Rowe, Mackaway, & Winchester-Seeto, 2012). Industry supervisors provided direct guidance enabling students to access procedural knowledge that would be difficult for students to learn without assistance. Industry supervisors were responsible for creating an authentic environment that supported 'learning' rather than just working and this was considered to be the difference between a cooperative education experience and students getting 'a job'. Students may be placed in a workplace setting without really experiencing or learning about the 'real-world'. If the supervisor provides tasks that have little consequence and where students are shielded from the tensions and politics of the organisation this influences the extent of the learning that can be gained.

Students were expected to be motivated and willing to learn, yet at the same time the industry supervisor needed to have confidence and a level of trust in their abilities. Earlier research in this context has confirmed that it takes time in a workplace to build trust and develop relationships (Fleming & Eames, 2005). The findings of this study also bring to our attention the importance of the interactions and developing relationships with workplace colleagues. Students were able to learn from being 'situated' alongside others whereby they were able to observe the everyday activities of the workplace. It was through dialogue and social interactions that students gained an understanding of the culture and values and what it is like to be a professional in the sport and recreation industry. However, it must be acknowledged that learning through interaction with workplace colleagues may not always be feasible. Limiting factors could be cultural and hierarchical constraints or where there is a lack of understanding or willingness of the co-workers to support the student learning experience.

Students valued the support of their academic supervisor particularly in developing the skills to enable them to reflect and make meaning of their experiences. An advantage of the part time BSR cooperative education model is that it enables students to meet regularly, on campus with their academic supervisor. Reflection is a key strategy that facilitates learning from experience (Raelin, Glick, McLaughlin, Porter, & Stellar, 2009). It was through dialogue and feedback from academic supervisors that helped students to integrate the knowledge gained in both the university and workplace environments.

CONCLUSION

The quality of industry supervision, the nature of workplace activities and motivation of the student were identified by cooperative education stakeholders as key influences on student learning. These are no different to the influences on learning identified where the learner is in full time employment (Billett, 2001). While the industry supervisor was expected to be a major influence (Cooper et al., 2010; Rowe et al., 2012), clearly evident in this study was the important influence of workplace colleagues. To enhance the learning experience, the university needs to prepare students so that when they enter the workplace they are active in seeking and nurturing meaningful discussions with their workplace colleagues. It is important that workplace supervisors and students are attuned to the valuable learning opportunities that occur through interactions in the social context of the workplace.

The findings of this study also affirm that academic supervisors have a major influence on student learning through facilitating the development of reflective practice and helping students to integrate theory and practice. It has been raised as a concern that in some universities the inclusion of academic supervision is challenged as not cost efficient within current workload constraints (Patrick et al., 2008). It is clearly evident from the findings of this study that academic supervision needs to be an integral and valued part of cooperative education.

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Validating the use of PPBS to Assess Social Withdrawal among Hong Kong Preschoolers in Low-Income Families

CHI-HUNG LEUNG

The Hong Kong Institute of Education, Hong Kong, China

Social withdrawal has been recognized as a complex and multifaceted construct that varies with regard to motivational tendencies and developmental consequences in early childhood (Coplan, Prakash, O'Neil, & Armer, 2004; Rubin, Burgess, & Coplan, 2002). Among preschoolers, three different forms of observed social withdrawal have been identified: reticent, solitary-passive withdrawal, and solitary-active withdrawal. Reticent is characterized by frequent and prolonged onlooking and unoccupied behaviours in social contexts (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). Coplan et al (2004) reported that reticent behaviour was significantly and positively associated with conflicted shyness (i.e., a desire to interact socially coupled with fear and anxiety). Reticent behaviour is hypothesized to be a marker variable for social anxiety (Coplan, 2000; Coplan et al., 1994, 2004) and has been linked in early childhood to numerous indices of maladjustment, such as peer rejection (Hart et al., 2000), lower motor abilities (Bar-Haim & Bart, 2006), convergent and divergent thinking (Lloyd & Howe, 2003), and internalizing problems (Coplan et al., 1994; Coplan & Rubin, 1998).

Solitary-passive withdrawal in young children (ages 4 -5) is characterized by the quiet exploration of objects and constructive activities while playing alone (e.g., building with blocks, reading books; Coplan et al., 1994). Research has found unsociable and solitary-passive behaviours to be linked to shyness and physiological indices of fear (Henderson, Marshall, Fox, & Rubin, 2004), low positive emotion, low regulation, and peer exclusion (Spinrad et al, 2004), and lower peer preference (Coplan, Girardi, Findlay, & Frohlick, 2007). It is also negatively associated with social competence and positively associated with shyness and internalizing problems in kindergarten boys (Coplan, Gavinski-Mlina, Lagace-Seguin, & Wichmann, 2001).

Solitary-active behaviour has been characterized by solitary-functional play (repeated sensorimotor actions with or without objects, such as hopping or skipping) and solitary-dramatic/pretend play (Coplan et al., 1994; Rubin, 1982). It is suggested that in early childhood this form of nonsocial play reflects social immaturity and impulsivity (Chen, Rubin, & Li, 1995; Coplan & Rubin, 1998). Indeed, solitary-active play has been positively associated with impulsivity, social maladjustment, emotion dysregulation, maladaptive social information-processing patterns, peer indices of rejection, and poor academic skills (Coplan et al, 1994; Coplan, Wichmann, & Lagace-Seguin, 2001; Harrist, Zaia, Bates, Dodge, & Petit, 1997; Rubin, 1982; Rubin, et al, 1995).

Three different forms (solitary-active, solitary-passive, and reticent behaviours) of social withdrawal have significant effects on the later social and emotional development among preschoolers. However, few researchers have examined the construct of social withdrawal in early childhood in China. Given that Chinese culture upholds group-dependent values and norms, socially withdrawn behaviours may be considered problematic in China because they take children out of the group (Nelson et al., 2012).

SOCIAL WITHDRAWAL IN CHINA

China may be categorized as more collectivistic than Western cultures, but the heterogeneity within China should not be overlooked. Indeed, this may explain why, when compared on a large scale, there is evidence that withdrawal, especially reticence, may be less problematic in China compared to Western cultures (e.g., Canada; Chen, DeSouza, Chen, & Wang, 2006), but within China withdrawal is more problematic in urban rather than rural settings (Chen, Wang, & Wang, 2009).

In line with the intra-cultural difference between urban and rural areas of responses to social withdrawal, it is believed that Hong Kong is affected by Western culture for nearly 150 as a British colony since 1847 and is a market-driven society. Children may be experience different forms of psychosocial difficulties (e.g., peer rejection, depression, and school problems) caused by social withdrawal. This seems to be happen more severely in low-income families in market-driven society, like Hong Kong.

CHILD POVERTY IN HONG KONG

There has been an increase in the prevalence of low-income households in Hong Kong in the past decade. There were 0.89 million people living in low-income families in 1995, while there were 1.25 million in the first quarter of 2005. In the 2011 Hong Kong population census, 26.4% of domestic households were in the poverty category. One in every four children (26.4%) lived in low-income households in the 2011 Hong Kong Population Census. Children in low-income families face financial and material barriers, and these barriers leave them trapped in a cycle of disempowerment. This also affects children's personal identity, relationships and mental well-being. A 2004 study compared Comprehensive Social Security Assistance (CSSA) recipients with non-CSSA recipients aged eight to 14. It was found that among those receiving CSSA, 72.7% had significantly lower self-esteem ratings and higher peer rejection than average measures. 43.4% exhibited high levels of social anxiety and avoidance of social interaction (Hong Kong Council of Social Service, 2005). Since previous researches of social withdrawal are mainly in middle childhood (Xu & Farver, 2009, Xu et al., 2007) and in middle class families in China (Nelson, et al., 2012), therefore, it is crucial and urgent to validate a culturally and developmentally appropriate instrument to enable accurate assessment of children's social withdrawal in low-income families in order to inform early childhood intervention in Hong Kong.

GENDER DIFFERENCES IN SOCIAL WITHDRAWAL

Nonsocial behaviours tend to have more maladaptive outcomes for boys than for girls in early childhood (Coplan, Closson, & Arbeau, 2007; Coplan, Gavinski-Molina, et al, 2001). First, the staggering gender imbalance favouring males in China demonstrates a cultural preference for males (Hudson & Den Boer, 2002). Indeed, in many Asian countries, sons are expected to provide financially for their families, including their aging parents (e.g., Singh, 2004). The expectations for sons to conform to societal norms even from an early age may be higher relative to daughters. Therefore, behaviours considered to be cultural inappropriate (e.g., withdrawing from the group) may result in more negative outcomes for boys. In support of this, research suggests that mothers appear to intervene more harshly with the use of shaming when it comes to the withdrawn behaviour in boys compared to girls (Nelson, Hart, Wu, Yang, & Olsen, 2006). Gender analysis revealed that boys evidenced significantly more difficulties with disruption of play, while girls demonstrated greater prosocial tendencies during classroom play. A recent work also found that girls (more so than boys) with higher ratings of interactive play will tend to receive more sociometric most-liked peer nominations (Mathieson & Banerjee, 2011). On the other hand, researchers have not found significant gender differences in the frequency of various nonsocial behaviours in Western cultures (Coplan, Gavinski-Molina, et al., 2001; Coplan & Rubin, 1998; Coplan et al., 1994; Rubin, 1982), but they have found gender differences in the outcomes associated with the display of nonsocial behaviours. In particular, nonsocial behaviours have been shown to have more maladaptive outcomes for boys than for girls in early childhood (Coplan, Closson, & Arbeau, 2007; Coplan, Gavinski-Molina, et al., 2001; Simpson & Stevenson-Hinde, 1985). Nelson et al.'s study (2012) indicates that subtypes of social withdrawal carry equally negative effects for girls and boys. These results regarding gender differences in social withdrawal among Chinese preschoolers seem to contradict what has been reported in Eastern literature, where evidence suggests that social withdrawal may present more risks for boys than for girls because of different societal and cultural gender-role expectations (Stevenson-Hinde, 1989). This seems the gender difference in social withdrawal is still inconclusive. Therefore, it is worth-noting to investigate the gender differences in social withdrawal among Hong Kong preschoolers.

An efficient way to validate a culturally and developmentally appropriate social withdrawal instrument is a teacher rating scale, because teacher ratings are the most common source of data on young children's social skills and behaviours (Caldarella & Merrell, 1997; Webster-Stratton & Lindsay, 1999). Teachers' ratings have often been

found to be reliable and predictive of later outcomes (Connolly & Doyle, 1981; Webster-Stratton & Lindsay, 1999). Teacher ratings are much less time-consuming than direct observation, and sociometric over extended periods of time while they are interacting with other children, and teachers are very familiar with children's social skills and behaviours (Fantuzzo, Davis, & Ginsburg, 1995).

The proposed study is to investigate social withdrawal among preschoolers in nonsocial play. Two factors that have a profound influence on the contexts for nonsocial play are the nature of available play partners, and the novelty of the play setting. The characteristics of play partners may alter the demands of the play setting, and influence children's play behaviours (Coplan, 2000). When faced with a novel setting (i.e., a new environment, unfamiliar peers and/or adults), some children are consistently quiet, vigilant, and restrained. These children have been referred to as inhibited (Kagan, Reznick, & Gobbons, 1989). Therefore, preschool teachers who are familiar with students in a familiar setting (e.g., school) are recruited to rate children's social withdrawal in nonsocial play setting. Nonsocial play is defined as the display of solitary activities and behaviours in the presence of other potential play partners. An important component of this definition involves the presence of other people, which implies the opportunity to engage in social interaction and group-oriented play (Coplan, 2000).

Lastly, a substantial studies of social withdrawal among middle childhood children of middle class families in both Western and Eastern cultures (Coplan, Prakash, O'Neil, & Armer, 2004; Rubin, Burgess, & Coplan, 2002; Nelson et al., 2012) have been done, however, few researches about social withdrawal in early childhood in low-income families is conducted so far, especially in Eastern culture. Most of the above studies in social withdrawal (solitary-passive, solitary-active, and reticence) are observed in nonsocial play settings using the Preschool Play Behaviour Scale (PPBS). Therefore, the proposed study is to use Confirmatory Factor Analysis (CFA) to develop the culturally and developmentally appropriate PPBS for teachers to evaluate the social withdrawal (solitary-passive, solitary-active, and reticence) of early childhood children in low-income families in Hong Kong firstly. This study investigated the gender difference in social withdrawal among early childhood children. Finally, the present study will inform early childhood intervention to prevent social withdrawal and its outcome factors to the children in low-income families in Hong Kong.

METHODS

Participants

A total of 1,622 children aged three to six and 152 teachers in ten kindergartens (about 160 students and 15 teachers randomly selected from each kindergarten) in the top five poverty-rated districts in Hong Kong (Hong Kong Council of Social Service, 2005) were randomly selected to participate in this study. All kindergartens were run and supported by the Non-Government Organizations (NGOs), like The Salvation Army, Caritas, Anglican Church and so forth. Nearly 75% families of the samples received government social security supports. The child poverty rates were all above 30%, ranging from 31.1% to 34.4% (Hong Kong Council of Social Service, 2005). About 98% students were Chinese, and 85% of them were new migrants from mainland.

All participant teachers with Bachelor degree in early childhood education and at least two years teaching experience were female, aged from 25 to 38. There were 249 children aged three (121 boys and 128 girls), 471 children aged four (226 boys and 245 girls), 431 children aged five (208 boys and 223 girls) and 471 children aged six (251 boys and 220 girls) observed and rated by the participant teachers. The mean ages of boys and girls were, 4.5 years and 4.3 years respectively.

Instrument

The Preschool Play Behaviour Scale (PPBS) is an 18-item questionnaire designed and widely used to assess social withdrawal in nonsocial play settings (Nelson et al., 2012; Stevenson-Hinde, 1989; Coplan, Closson, & Arbeau, 2007; Coplan, Gavinski-Mlina, et al., 2001). Teachers rate items on a 5-point Likert scale, denoting frequency of occurrence (i.e., 1=never, 2=hardly ever, 3=sometimes, 4=often, 5=very often). The PPBS should be administered

after preschool teachers have had a reasonable period of time (i.e., several weeks) to get to know the children in their class.

The first three subscales were designed to assess the three distinct forms of nonsocial play behaviour. These include reticent behaviour, solitary-passive behaviour, and solitary-active behaviour. As well, in order for teachers to have a wider and more diverse range of play behaviours to assess, additional items were included to assess social play and rough play. To score the PPBS, the appropriate items for each of the subscales are summed.

Procedure

Upon the translation of the PPBS, the “back-translation” procedure – a commonly used procedure in the translation of cross-cultural research instruments (Mason, 2005) – was adopted in this study. The translation process involved the work of two translators: the first translator was responsible for the forward (English–Chinese) translation, and the translated instrument then underwent the back translation by another translator, who had no access to the original instrument before the time of translation. The two translators then sat together and compared the back translation with the original items to identify discrepancies, and then made modifications to the translated version. The translated instrument was sent to the bilingual investigators (who can handle both English and Chinese for term checking and approval. Subsequently, the back-translated PPBS was given to teachers to rate their children. It was expected that teachers could complete a PPBS rating for each child within five minutes during the free play time.

CFA was used to test whether the pattern for a particular factor of peer play fitted significantly for the Hong Kong samples. Multi-sample modelling is used to compare the fit of two different models (boys and girls), and to decide whether a complete model gives a significantly better description of data than a simple model. AMOS 19.0 is employed to perform the CFA.

An independent sample t-test was employed to investigate the gender difference in five nonsocial play factors: social withdrawal (solitary-passive, solitary-active and reticence), social play and rough play.

A correlation matrix was conducted to examine the relationship between age and nonsocial play (social withdrawal [i.e., solitary-passive, solitary-active and reticence], social play and rough play).

RESULTS AND DISCUSSION

Five-Factor Model of Preschool Play Behaviour Scale (PPBS)

The five-factor model of the PPBS (Coplan & Rubin, 1998) statistically fitted the results of the Hong Kong samples. It has been suggested, with some consensus in the psychometric literature, that a model demonstrates reasonable fit if the statistic adjusted by its degrees of freedom does not exceed 3.0 (Kline, 2004): $\chi^2 / df \leq 3$. The chi-square and degree of freedom are $\chi^2 = 1648.89$ and $df = 571$ respectively, therefore, the adjusted statistic was $1648.89/571 = 2.89$ which is less than 3. The model indexes were shown to conceptually fit and be acceptable, with comparative fit index (CFI) = 0.95, Tucker-Lewis Index (TLI) = 0.94, RMR < 0.05 and RMSEA < 0.08. However, the number of items of the PPBS was reduced to 14 from the original 18 items used by Coplan and Rubin. Four items were identified as redundant after performing the CFA on the present model. The five-factor model still fitted to measure the Hong Kong samples.

Five-Factor Model of PPBS Fitted for Both Boy and Girl Samples

Measurement invariance of the factor loadings for the social withdrawal model was tested by comparing a constrained model that had all factor loadings constrained to be equal across boys and girls with baseline model. The goodness-of-fit index (χ^2) increased nonsignificantly ($\chi^2_{diff} = 15.25$, $df_{diff} = 7$, $p > .05$), which indicated that the items used to measure social withdrawal subtypes (solitary-passive, solitary-active, and reticence, social play, and rough play) were statistically equivalent for boys and girls in this Hong Kong sample.

Reticence

The item "Watches or listens to other children without trying to join in" was not included in the "reticence" construct in the present study because the participant teachers thought the item had a different interpretation with Coplan and Rubin samples. The participant teachers may think two other items, "Takes on the role of onlooker or spectator" and "Remains alone and unoccupied, perhaps staring off into space", have covered the core meaning of reticence by frequent and prolonged onlooking and unoccupied behaviours in social contexts (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). Listening may involve active listening, students may have facial responses when listening or watching to other children.

Solitary-Passive Play

Only the items "Plays by himself/herself, examining an object or toy" and "Play alone, exploring toys or objects, trying to figure out how they work" were included in the solitary-passive construct. Both the items "Plays alone, building things with blocks and/or other toys" and "Plays by himself/herself, drawing, painting pictures, or doing puzzles" were excluded from the solitary-passive construct. It seems that both these items are executing some playing activities, like building things, drawing, painting pictures, and doing puzzles. The participant teachers may think children are social disinterest which children may refrain from social interaction because they lack a strong desire to play with others (i.e., low social approach motivation), although they are also not strongly averse to peer interaction (i.e., low social avoidance motivation (Asendorpf, 1991). Social disinterest in early childhood was related to higher attention span, less negative emotionality, and a greater expressed preference for playing alone (Coplan, et al., 2004).

Solitary-Active Play

The item "Engages in pretend play with other children" was originally in the social play construct which was added to the solitary-active play construct items "Engages in pretend play by himself/herself" and "Plays 'make-believe', but not with other children". The result was consistent with the previous studies (Coplan & Rubin, 1998) that the solitary-active factor were somewhat mixed with sociodramatic play which is playing in pretend play with others. The solitary-active play is just engaging in pretend play alone. The sociodramatic play is actually a marker of social competence while solitary-active is quite normal for young children. There was evidence to suggest that children who engage in a comparatively high frequency of solitary-active behaviours are not shy (Coplan & Rubin, 1998). Thus, it does seem clear that solitary-active behaviours should not be included among behavioural indices of shy, anxious behaviours. However, there are important issues with this construct that remain unresolved. Solitary-active behaviour simply does not occur often enough during indoor free play at the preschool for teachers to accurately assess it (Coplan & Rubin, 1998). This is also happened in the Hong Kong samples. Preschool teachers have rated all pretend plays with or without other children as solitary active play.

Social Play

The two items, Plays "make-believe" with other children" and "Engages in pretend play with other children", were deleted from the social play construct. The result of this construct once again confirmed that preschool teachers have seen pretend play as solitary active play rather than social play. Social play in their sense is somewhat explicitly in conversation and in activity with other children that is also easy to be observed in the classroom.

Rough Play

Both social play and rough play are established to examine the discriminant validity of nonsocial play (reticence, solitary-passive, and solitary-active). The result was different from Coplan and Rubin's study (1998). Reticence was significantly associated with observations of solitary-passive or solitary-active play. This may be due to the large sample size (N=1648) of the present study compared with Coplan and Rubin's study (N=337). Social play is significantly negative correlated with reticence and positive correlated with solitary-passive or solitary-active

play. Because the sample size is large, the correlation between social play and solitary-passive play is low but still significantly. However, the social play showed highly significant negative correlation with reticence. Rough play indicated high positive correlation with solitary-active play, and low positive correlation with solitary-passive and reticence.

It is worth noting to discuss two sets of high correlation data, negative correlation between social play and reticence and positive correlation between solitary-active play and rough play. The negative correlation between reticence and social play indicated discriminant validity. It is difficult to understand the positive correlation between solitary-active play and rough play. However, if we looked at the relationship between age and rough play, we can get a clear picture. The older the students are, especially in boys, the more rough play is. This may imply the older students like to involve mock fighting and 'rough and tumble' in pretend play.

Gender Analysis in Social Withdrawal

An independent sample t-test was used to assess the gender difference in social withdrawal. Results indicated that there were significant gender differences in reticence, $t_{reticence} = 3.29$, $X_{boys} = 1.39$, $X_{girls} = 1.27$, $df = 1617$, $p < .001$, and solitary-passive play, $t_{solitary-passive} = 3.45$, $X_{boys} = 2.24$, $X_{girls} = 2.12$, $df = 1617$, $p < .001$. There was no gender difference in solitary-active, $t_{solitary-active} = 0.45$, $X_{boys} = 1.45$, $X_{girls} = 1.43$, $df = 1617$, $p > .05$. Boys evidenced significantly more socially withdrawal in reticence and solitary-passive during play. There were also significant gender differences in social play, $t_{social\ play} = -2.27$, $X_{boys} = 2.66$, $X_{girls} = 2.75$, $df = 1617$, $p < .05$, and rough play, $t_{rough\ play} = 12.34$, $X_{boys} = 1.64$, $X_{girls} = 1.06$, $df = 1617$, $p < .000$. Boys showed more mock fighting and 'rough tumble' in play. The literature also provides evidence that girls exhibit greater social competence (social play), greater regulated behaviour and less problem behaviour, also in the present study (Nelson, Hart, Wu, Yang, & Olsen, 2006). The results are consistent with previous literature (Nelson, Hart, Wu, Yang, & Olsen, 2006).

Developmentally Appropriate Preschool Play Behaviour Scale

Correlations matrix was used to investigate the relationship between age, and social withdrawal (three subtypes : reticence, solitary-passive, and solitary-active), and social play, and rough play. Results indicated that social withdrawal in three subtypes, such as reticence, solitary-passive, and solitary-active, decreases with age, $\alpha_{age\ and\ reticence} = -.07$, $p < .01$, $\alpha_{age\ and\ solitary-passive} = -.13$, $p < .01$, and $\alpha_{age\ and\ solitary-active} = -.05$, $p < .01$. On the other hand, social play was increased with age, $\alpha_{age\ and\ social\ play} = .43$, $p < .01$. The PPBS is said to be a developmentally appropriate scale to measure social withdrawal (three subtypes : reticence, solitary-passive, and solitary-active) and social play accurately. This is also consistent with Blurton-Jones (1972) study that social maturity was composed of social play behaviours.

RESEARCH IMPLICATIONS

Emic versus Etic Considerations of PPBS

One of the concerns of this study is the emic/etic consideration which evaluates whether PPBS under investigation are emic (arising from the culture) or etic (similar across cultures). Teachers viewed rough play in etic consideration which they see mock fighting and 'rough and tumble' in rough play. They consider solitary-active and social play in emic concern, Hong Kong teachers think all pretend play is solitary-active no matter it is with or without other children. They also think the other two subtypes of social withdrawal, reticence and solitary-passive, in emic concern. Teachers think watching or listening may involve facial responses, children may involve in active watching or active listening to other children. Play with activities, like drawing and building things, are not seen as solitary activities.

Informing Early Childhood Intervention

The PPBS (Hong Kong version) also has implications for classroom practice. The PPBS can be used by preschool teachers to assess their class's overall level of social withdrawal (three subtypes: reticence, solitary-passive, and solitary-active) and social play and design classroom activities that will foster social competence based on the

assessment. Additionally, the PPBS can be used to inform peer-mediated programs for specific students by identifying children most in need of peer assistance. Fantuzzo and his associate (Fantuzzo & Holland, 1992) successfully demonstrated that resilient, socially skilled preschool children can play a major role in raising the social competence of less socially skilled, vulnerable peers (victims of abuse). The application of peer interaction play could also be extended to develop children's problem-solving skills, communication skills and prosocial behaviour.

Enhancing Younger Children's Social Competence through Play with Older Children

With the more social play behaviour observed in older children, teachers can organize more mixed-age play activities in the classroom. Younger children's social competence can then be enhanced by observing the play tactics and affective characteristics of older children in play activities, like how to engage in group play, to initiate conversation in play, and to play in group with other children.

FUTURE DIRECTIONS FOR CONSIDERATION

Lack of Concurrent Validity of the PPBS (Hong Kong Version)

Investigations into the concurrent validity of the PPBS with established measures of social competence (e.g., the Child Behaviour Checklist [CBCL]) and peer interaction play behaviour (e.g., the Penn Peer Interactive Play Scale [PIPPS]) are encouraged to identify children's strengths and needs regarding peer interactions and school adjustment. In addition, this assessment system can assist with establishing continuity between the home and school by providing cross-informant ratings of children's peer play, such as parents' ratings (Nelson et al., 2012).

Further Investigation of Shyness, Social Disinterest, Social Withdrawal, and Play Disconnection

Social withdrawal that includes solitary constructive play is sometimes encouraged within classroom settings. For preschoolers, this type of withdrawal may help maintain social order within the classroom or allow time for self-reflection or regulation after a highly emotionally arousing event (Rubin, 1982). Molina, Coplan, and Wichmann (1999) also found that teachers, parents and peers often reinforce withdrawal when it is associated with solitary constructive behaviour and that this behaviour is also associated with peer acceptance. Play disconnection captures disengagement from play and non-participation in play, such as being withdrawn, hovering outside the play group and rejecting invitations to play. Moreover, different cultural values, beliefs, and expectations for behaviour can influence children's play (Rubin & Coplan, 1998). These variations in play highlight the importance of understanding the cultural context for children's play interactions. Therefore, it is crucial to further investigate the cultural context of understanding social withdrawal, social disinterest, shyness, and play disconnection in play.

CONCLUSIONS

The five-factor nonsocial play model of the Preschool Play Behaviour Scale (PPBS) – reticence, solitary-passive play, solitary-active play, social play, and rough play – is confirmed for Hong Kong samples. The PPBS is also an age-appropriate instrument for measuring social withdrawal behaviour and social play. Less socially mature and younger children tend to elicit more socially withdrawal behaviour, while more socially mature and older children are inclined to submit to social play behaviour. The development of the PPBS (Hong Kong) can provide useful information for preschool teachers and early-childhood educators to inform effective intervention for children with less socially competent behaviour in low-income families. Emic understanding of two subtypes of social withdrawal, reticence and solitary-passive will receive further attention when conducting a study on children's nonsocial play in the future. Children's make-believe play is affected by imitating cartoon or online game hero with easy access of smart phone devices. Different cultural values, beliefs, and expectations for behaviour can influence children's social withdrawal and social play. These variations in social withdrawal and social play highlight the importance of understanding the cultural context for children's play interactions.

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Interaction between Industry Research and Academic Projects

BRENDA LLOYD & SUSAN CHARD

Whitireia New Zealand, Wellington, New Zealand

There has been a lot of discussion around how best to encourage research and development. The government has been trying to provide incentives in the form of tax breaks. Information Technology moves forward at a rapid pace and often it is necessary to reassess the possibilities frequently. Companies rarely have Information Technology as their core business, yet require its use to be able to progress and gain competitive advantage within their business environment. The expansion of practical focussed technology courses into the postgraduate arena could provide the expertise which industry needs. This allows research projects to be undertaken, without a large outlay of resources by the individual companies. It also gives the academic institutes the ability to undertake the research projects necessary to complete a postgraduate qualification. Literature has highlighted the importance of the practical industry projects to all stakeholders and to a lesser extent the research projects.

AIMS AND METHOD

The aim of this research is to build on the knowledge available regarding the industry capstone projects which have been run over seventeen years, and expand this into research based projects which are a more recent addition to the academic repertoire.

A literature review was completed to examine previous research carried out in this area. The projects with a research bias that have been already undertaken were reviewed and where possible the recipients were contacted to see how useful these have been. The questions asked included: were the technology and processes used within the projects still being used, and did they have an impact on the company? The last five years of Information Technology capstone projects undertaken by students in the final year of the Bachelor of Information Technology run by the faculty were examined to ascertain the number of research projects that were both offered and undertaken.

To determine what constitutes research in IT, we reviewed information from the IT Thesis Analysis Project (Cole & Ekstrom, 2010; Ekstrom, 2013; Zilora & Bogaard, 2013) on the changing nature of IT as an Academic Discipline. These describe a wide ranging research project into current IT Postgraduate research theses globally. Their analysis shows that the theses generally took the form of:

- Evaluation of [technology] for [purpose],
- What is the value of an IT application and how do you measure that value?,
- What is the cost of an IT application and how do you measure that cost?, and
- Overarching: What are the cost/effects of an IT application and how do you measure that value?

The evaluation of IT Research theses also showed the following pattern of topics:

- DEV: Development, building, implementation, integration indicating delivery of a system into a context,
- ED: These theses came in two flavours, those that were focused on concept learning and those that were actually the application of IT to an educational setting,
- IAS: Information Assurance, Security, and Forensics,
- PROJ: Project management and applications of IT to Project Management, and
- TECH: Technology evaluation and testing. "Comparison" and "evaluation" seem to be the most common indicator terms.

The research undertaken by IT graduates tend not to be submitted for publication according to SIGTE (2006), mainly due to the fact that most graduates do not perceive the need, as they usually go into industry rather than academia. The capstone projects were compared against this definition of IT research:

RESULTS

The literature shows that academic engagement with industry research partners benefits both parties (Perkmann et al., 2013) in that it mobilises resources between the two parties and gives students exposure to the research culture within industry (Behrens & Gray, 2001). Industry also gains by helping them with new initiatives which they would possibly defer due to lack of immediate economic benefit (Levén, Holmström, & Mathiassen, 2014). All stakeholders involved with the capstone projects win according to Lloyd and Chard (2013). The ability to use the skills gained by students in the research field allows these stakeholders another avenue to take advantage of these benefits. There was some concern that the inclusion of industry in academic research projects will undermine the student's research experience or academic freedom, but according to Behrens and Gray (2001) there is little support for this opinion.

We have been running capstone projects for over ten years, in the second semester only, until 2010 and since then in both semesters. The last five years projects were examined to ascertain the proportion of research projects that were offered. The definition of a research project versus a non-research project is open to interpretation, as all the projects carry some element of research due to the fact that the students have not worked in an industry environment or attempted a project on the scale which is expected for the capstone projects. The guidelines used when completing the breakdown of projects as shown in Table 1 are: that if an application has been developed before using the same or similar tools then it qualifies as a non-research project, for example a functional web page. If it is a totally new concept and has not been attempted before then it is a research project, these are often proofs of concept. There are somewhere there is a combination of both for example proof of concept then develop using familiar tools, these are part-research projects.

TABLE 1. Breakdown of projects in the last five years

Year	All research	Part research	No Research	Notes
2009	1	2	1	Semester 2
2010	5(2)	3	2	
2011	2	3	4	
2012	4(1)	3	5(1)	
2013	5(1)	3	2	
2014	1(1)	2(1)	2(1)	Semester 1
Total	18(5)	16(1)	15(1)	

Note: numbers in brackets were offered but not taken up. Numbers outside were all projects offered including those not taken up.

The main reason for not taking up offers of projects is not having enough suitable students to complete all the projects. Informal discussions were conducted with past clients to ascertain if the projects were useful in the longer term. In most cases the technology, the processes, or both were continuing to be used. In the cases where they were not, the exercise of completing the project was a valuable learning experience for both the students and the company.

CONCLUSIONS AND FUTURE RESEARCH

The restrictions of time and lack of research processes within the undergraduate program was a factor in applying for accreditation of postgraduate qualifications. These qualifications need to be "applied qualifications", as are the undergraduate qualifications, because that is part of their uniqueness and an aspect which is attractive to industry. Technology moves at a rapid pace and although industry would like to take advantage of these newer technologies, they often do not have the expertise, time or resources to conduct the necessary investigation and research into the new technologies. Undergraduate capstone projects have been able to help but there is a great need for larger more research based projects to be undertaken. Students are also

interested in gaining higher applied qualifications after they have completed their degree. The staff benefit by exposure to leading edge technology and their applications. By following a formal postgraduate program there is a better chance that some of the research undertaken within these projects will be published, thus raising the profile of IT and helping the wider population to understand its position within both industry and academia. Projects are a useful way of allowing industry to move forward in the field of research and development. The higher level projects will allow for a more research focused tool to aid this development. The institute has recently been accredited to offer postgraduate qualifications, including a Masters of Information Technology. This allows research projects to be undertaken by our school.

There are a number of ways this research can be expanded. So far it only covers five years within our institution, a fuller picture would be gained by expanding it to other institutes and over a longer period of time. Trends could then be plotted as in Su's work within USA (Su, 2014) which shows a marked rise in affiliations over the last ten years. The postgraduate projects could be monitored to ascertain their impact on industry and academia within New Zealand, as applied postgraduate qualifications are a relatively new development which both academia and industry are embracing.

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Blended Learning and Supervision of Distance Internship and Project Students

DAVID SKELTON

Eastern Institute of Technology, Napier, New Zealand

This paper describes the experiences and challenges of supervising distance internship students utilising a blended mix of face-to-face visitation, online facilities and video communication. A blended learning programme for degree students has been in place for a newly acquired remote second campus and the cooperative programme now also uses the blended techniques to supervise and organise the third year industry projects and internships. The significant remote campus is part of a dedicated blended learning system and the supervision of cooperative students is a natural progression of this overall teaching delivery system. In addition to the intentional blended delivery remote campus and the associated cooperative students, the paper also includes discussion of supervision of students who leave their home campus to pursue internships in another location.

The paper describes the unique challenges of maintaining communication to both students and industry sponsors throughout the semester under study. One aspect of remote organisation is that key staff who normally organise industry sponsors locally around the main campus now need to communicate to organisations from a 300 km distance. There appears to be minimal research on using distance or blended systems for supervising cooperative or internship students (Nelson, Nichter, & Henriksen, 2010).

The issues raised also include the growing scenario where local students deliberately move from their campus of study to another city to fulfil their final year internship/project. In these cases, distance supervision is required with online support but students are not near a satellite campus of the institute so are largely communicating through online means. Universities and ITPs are increasingly offering multiple campuses and blended learning options to their students whether local, remote or international. This implies that institutes will need to become flexible in their supervision of cooperative students and have a comprehensive, rich blended mix of communication and mentoring channels for their supervised students and for their industry sponsors.

BLENDED CASE STUDY AND RESEARCH QUESTIONS

The Eastern Institute of Technology (EIT), based in Napier, merged with Tairāwhiti Polytechnic, Gisborne in 2011. A number of degrees are now being delivered on the Gisborne campus through blended systems, including video lectures and enhanced e-learning systems. The Bachelor of Computing Systems (BCS) internship programme was coordinated and supervised through a blended system for the first time in 2013. Although blended learning is commonly used to describe a mix of face-to-face and online and other delivery systems, it has also been used in the past to describe the blending of academic education and industry training so in this case 'blended' could describe the blend of online/video and face-to-face, as well as the blend of academic and industry learning.

Questions relating to the blended cooperative BCS students include:

- Did the blended BCS interns experience a satisfactory level of communication and supervision?
- Does a blended supported BCs interns prepare them to the same standard as the face-to-face interns at EIT? What issues surfaced during the 2013 semester while supervising these interns?
- Can these experiences be useful for the general community of cooperative academic supervisors?

ORGANISING THE INTERNSHIP

The first challenge with a remote internship is the matching of student to industry. Fortunately, although the Gisborne campus students utilise a blended learning system, there was one lecturer on the Gisborne campus who

was available face-to-face on location. In this case, a nominated local lecturer initiated communication to local industry people and set up some meetings between students, Gisborne staff and the Projects/Internship Coordinator from Napier. The normal arrangement issues for setting up cooperative students are complicated by the distance and blended delivery. "There is a twofold problem associated with the cooperative placement. Firstly, for academics, the main challenge is to coordinate, implement and administer the learners over varying locations in a consistent manner, and secondly, for learners, it is essential to have regular contact with the course coordinator and peers as well as with a supervisor to support their academic learning in the workplace" (Howison, 2010, p. 47).

STARTING THE INTERNSHIP

In a normal local face-to-face situation, it is possible to hold meetings with prospective interns and monitor their pre-internship contacts with industry sponsors. This is not possible in a distance situation, so the coordinator did not get to know the students so well, nor was able to mentor and monitor the student as they sought an industry sponsor. In this case contact between student and sponsor involved an initial meeting, while mentoring and preparation of the student was performed by email and occasional video conference calls. This issue of supporting the student from the academic perspective and from the host industry perspective has been acknowledged as a risk factor even in ideal circumstances (Winchester-Seeto, Rowe, & Mackaway, 2013).

Although supported remotely, the internship student still was required to deliver a proposal presentation. This was done with the student and industry supervisor in attendance in EIT Tairawhiti, and the academic supervisor observing via video link. The main academic supervisor was based in Napier and was also the course coordinator, so there was less delegation to a nominated specific supervisor. Some supervisory tasks were assigned to the local lecturer based in Gisborne, however, the Napier coordinator mainly undertook assessment and video meeting guidance.

SUPERVISION DURING THE INTERNSHIP

Supervision of the Gisborne interns included a greater use of email communication between the EIT supervisor and the students, a weekly video conference meeting between the EIT Supervisor and the interns was held, and a greater use of Moodle for document sharing was utilised, and intermittent travel to Gisborne by the EIT supervisor/coordinator to meet with the students.

While EIT has supervised students in other locations before, in those cases the student has been well known to staff in Napier over 2.5 years before starting their internship in another city. The Gisborne case differs in that the student has progressed for 2.5 years through a blended delivery system and so was not as well known or mentored by EIT Napier staff.

BLENDED DIFFERENCES

This group of students under study had experienced 18 months of blended learning within their degree before their internship semester, and so were familiar with video conference communication. Students may have emerged from an entirely blended or e-learning programme of study that has included their entire programme of study or degree, not just the cooperative experience.

The location of Gisborne is limited in the number of businesses who are able to offer work placement experiences, as well as limitations in actual job openings. This impacted on finding the placement and in staff being less familiar with local industry contacts.

DISCUSSION AND CONCLUSIONS

Communication with a distance internship student and remote industry sponsor can be effective, but it does require relinquishing more control than in a normal local situation. This case highlighted the need for experienced local staff in some capacity to initiate industry contacts, and to mentor and prepare the intern students.

In addressing the research questions, the interns reported a satisfactory level of supervision. They were able to request additional video conference meetings with Napier staff if they needed advice or support. The differences in supporting a blended mode distance cooperative student included: video conference presentations by the student, increased email communication between student and academic supervisor, travel to the remote location, and an increased dependency on course schedules and documentation available online on the LMS. Additional communication was also necessary between the internship coordinator and the remote industry sponsor.

Finally, in addressing the research questions, the blended BCS interns did experience a satisfactory level of communication and supervision; however, the situation was not optimal and required more work per student than supervising a localised non-blended intern. In this case, the blended supported BCS interns were not as well prepared to the same standard as the face-to-face interns at EIT and supported locally. This was probably due to the combined effect of the blended mode of their degree in general, then the remote blended supervision, which meant less mentoring and face-to-face development work with each student.

Issues that surfaced during the 2013 semester while supervising these interns included a lack of confidence by the interns and an increased dependence on phone, email, and video communication. It is hopeful that these experiences will be useful for the general community of cooperative academic supervisors as this situation is likely to be a growing trend for institutions, so examining another case is useful.

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The First Hurdle: Preparing Students for Industry Interviews

CATHERINE SNELL-SIDDLE, SARAH SNELL, & AARON STEELE
Universal College of Learning, Palmerston North, New Zealand

The Bachelor of Information and Communications Technology (BICT) at the Universal College of Learning (UCOL) requires a compulsory 45 credit industry-based/capstone project over one semester which is the students' final semester and culmination of their studies. The Professional Practice course was added to the curriculum as a prerequisite to this industry project to ensure students gained an awareness of the importance of soft skills, making them ready for professional integration with industry, the work setting and subsequent recruitment processes. Within the Professional Practice course students source their own capstone projects. However, prior to project sourcing, students participate in cooperative education interview skills and role-play session. This session is comprised of a unique combination of industry engagement and academic components and aims to simulate a real-world industry interview environment. The inclusion of this session was driven by an increased expectation for sufficiently developed soft skills from the ICT industry.

The nature of work in the ICT industry has evolved and ICT graduates are expected to possess not only technical skills but highly developed interpersonal skills. ICT professionals now need to develop the ability to seamlessly communicate with colleagues and customers on a technical and non-technical level. This has resulted in an increasing demand for soft skills from employees in the ICT industry. In an article by Salpeter, likability or cultural fit is identified as a determining factor for ICT job candidates (Salpeter, 2013). A number of other studies also highlight the importance of soft skills during the interview process and for on-going success in industry (Carter, 2011; Duncan, 2011; Joseph, Ang, Chang, & Slaughter, 2010). Interestingly, a related cooperative education study by Coll, Lay, and Zegwaard (2001) also highlights the importance of soft skills during the interview process, and suggest that soft skills are highly rated by employers. The authors proposed trial interviews with faculty members as an effective means for enhancing student self-efficacy for pre-placement interviews (Coll, Lay, & Zegwaard, 2001). In another related study, Chen, Muthitaacharoen, and Frolick (2003) looked at the effectiveness of role-play exercises for soft skills improvement for ICT professionals. They found that role-play exercises were an active learning technique that created training situations where the interpersonal interactions and communication flow characteristics of the ICT industry can be simulated. They concluded that role-play exercises were a viable training method that can rapidly improve communication skills, allow participants to experiment with different strategies without real consequences, and also enhance to self-confidence of participants (2003).

UNIQUE FEATURES

As mentioned in the previous section, an innovative interview role-play assessment was developed as a major component within the Professional Practice course within the BICT degree. The interview role-play was designed to create an awareness of soft skills and to provide students with a simulated interview experience. This activity was designed to highlight the importance of being able to demonstrate an array of necessary skills, abilities, and traits required in interview situations.

The role-play interview comprised of a panel of three ICT industry representatives who took the role of potential employers. The students took on two roles during the exercise, first as a third person observer of the interview process, and then secondly and the interviewee. The students took turns in the 'hot seat' as the interviewee, meanwhile, the rest of the class would observe the interview process from the perimeter of the room (Figure 1).



a)



b)

FIGURE 1. Where a) is the peer observers of interviewee student in the 'hot seat'; and b) is the interview panel with student participant.

In the weeks leading up to the role-play exercise extensive preparatory work is undertaken with the students. Information about the interview process, typical interview formats, common questions, presentation tips, and non-verbal communication skills are covered. Examples range from suitable business attire, personal hygiene, hand shaking, eye contact, ways of answering behavioural descriptive and hypothetical type questions, building rapport, and ways of coping with unexpected questions and interview stress.

Prior to the interview role-play the panel members are briefed by the Professional Practice lecturer and are given a structural outline of the interview activity with starter questions and a job outline with scenario (these resources were also made available to the students prior to the activity). Panel members then build from these starter questions and scenario to ask more technically specific questions. Panel members are also asked to give a five to ten minute presentation to the students about how they interview within their respective organisations and key characteristics that they look for when interviewing. These presentations occur directly before the role-play and help to set the tone for the coming activity for both the students and the industry panel members.

Once the interview role-play begins, the lecturer randomly calls each student to the interview hot seat. The student will remain in the role of the interviewee for approximately five minutes during which they will answer three to four unique questions. As this is happening, the other students are observing the interview process from a third person perspective. This allows each student to learn from not only their own experience, but also from the experiences of other members of the class as they respond to different questions. Furthermore, the entire interview role-play is filmed enabling each student the ability to review and reflect on his or her interview experience.

Post interview role-play each panel member provides general feedback to the students as a whole regarding the activity. This feedback often includes comments about student responses and interview performance. Positive aspects are highlighted as well as areas that could be improved. This debrief session is often interactive allowing students to seek clarification, ask further questions, and gain specific feedback from the panel members. Finally, to conclude the session an afternoon tea is provided which also doubles as an opportunity for students to network with the panel members.

DISCUSSION

Prior to the role-play, students reported feelings of anxiousness and nervous anticipation, despite the preparatory work undertaken during class time. Although at first thought this sounds like a negative experience, it in fact demonstrates that the activity is a true reflection of a real-world interview experience. During the interview role-play, students began to adapt to the environment and are able to draw on lessons learnt in the preparatory sessions. After students had completed their turn in the 'hot seat', they appeared more relaxed, as would be

congruent with a real-world interview. However, in this situation students are also able to observe their peers being interviewed. This is a unique feature of the environment in which students are able to gain exposure to varying questions and responses, thus providing a learning experience that otherwise would not be encountered in a real interview situation. After the interviews were complete, students actively engaged with the interview panel members. During this dialogue students were observed as being more relaxed, however, they still maintained an appropriate level of professionalism towards the panel members.

In the subsequent weeks/months, as students had time to reflect they began to appreciate how beneficial the experience was. This was particularly evident when students were able to draw on the experience when securing their industry based capstone projects and interacting with their potential sponsors. Furthermore, students from the earlier iterations of the exercise who successfully entered the job market have reported the activity as being essential to their success during the interview process.

Each semester the panel members report that they are impressed with the level of professionalism demonstrated by the students. Some students have also been 'head hunted' by members of the panel as a result of their performance during the role-play interview. The panel members have always been very supportive of the role-play activity and are always willing to participate in future iterations.

From the lecturer's perspective, the interview role-play functions extremely well as an assessable component in the Professional Practice course. The lecturer does need to act as a facilitator during the session, however, this is not a time consuming role. The majority of the time, the lecturer can act as an assessor, observing each student's individual performance as well being able to review video footage of the interviews to assist with marking and feedback to the students. The activity is also viewed by the lecturer as a great way to bring industry into the classroom and connect students with employers.

IMPLICATIONS

There is no doubt that the portrayal of soft skills play a role in most, if not all, hiring decisions. The interview role-play activity developed for this study has proven invaluable for students providing them with a real-world experience, highlighting the importance of being able to demonstrate skills, abilities and traits required in an interview situation. The role-play, while providing the real-world interview experience, goes beyond this and gives participants the opportunity to hear a wide range of other responses and reactions to challenging and 'left field' type questions.

The interview role-play was a valuable learning experience for the participants, providing them with an opportunity to engage with ICT professionals, while at the same time completing part of the assessment requirements for the course. Interestingly, it also provides industry with a unique experience within the academic institute.

The researchers envisage that the interview role-play could well be applied to any discipline which requires students to work within industry as part of their study. Future work could include surveying students, lecturers, and panel members before and after to collect quantitative and qualitative data relating to the suggested benefits and insights of the activity.

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Mentoring Mentors: Cooperative Education in the ICT Education Industry

AARON STEELE, CATHERINE SNELL-SIDDLE, & SARAH SNELL
Universal College of Learning, Palmerston North, New Zealand

In many New Zealand Institutes of Technology it is common to have lower level stair-casing programmes that prepare students to enter Level 7 bachelor degrees in ICT and computing (Steele, Snell-Siddle, & Snell, 2012). At the Universal College of Learning (UCOL) the Bachelor of Information & Communication Technology (BICT) degree is preceded by a Level 3 Certificate in Information Technology for Business (CITB) and a Level 4 Certificate for Advanced Computer Users (CACU). Students beginning tertiary education, who do not have the prerequisite entry criteria for the degree programme, often choose or are directed to enrol in either one of both certificate level programmes as a way to gain entry into higher study. The students gain the necessary prerequisite knowledge that then enables them to make the transition into study at degree level. However, student engagement and successful qualification completion within the certificate programmes can suffer due to either student attrition or underdeveloped study skills. Often these students are seen as having the potential to succeed but can fail to capitalise on this opportunity due to various distractions and reasons in what for many is a new learning environment at the tertiary level. Common distractions seen within the certificate student cohort include: social media; gaming; personal social issues; attitude towards learning; self-efficacy; and coping with the freedom afforded by the tertiary environment compared to secondary school.

According to the literature, mentoring can be an effective approach for providing an additional layer of support for at risk students (Luecke, 2004). According to Bell (2002, p. 133) "A mentor is simply someone who helps someone else learn something that he or she would have learned less well, more slowly, or not at all if left alone". The function of a mentor includes the demonstration of the kinds of behaviours, attitudes, and values that lead to success. The mentor is also able to encourage new ways of thinking and acting, and pushes the mentee to stretch his or her capabilities (Kram, 1988; Luecke, 2004).

At UCOL a suggestion was put forward to utilise third year BICT students as mentors for the lower level CITB and CACU students. However, it was quickly noted that in order for this mentoring arrangement to be successful the BICT students would require mentoring from the UCOL teaching staff on how to effectively mentor the CITB and CACU students. Interestingly, this mentoring of mentors would essentially be a cooperative education experience for the BICT students in the ICT tertiary education sector. Although the relationship between the BICT mentors and the CITB and CACU students is an interesting topic in of itself that could be further explored, the focus of this paper is on the relationship between the UCOL academic staff members and the BICT mentors.

UNIQUE FEATURES

Typically, cooperative education or work-integrated learning (WIL) focuses on the learning environment where students participate in an industry-based component outside of the educational institute as part of their studies. This work-integrated learning environment is said to require a three-way partnership between the student, the workplace and the tertiary organisations (Martin & Hughes, 2009). This partnership usually includes a workplace mentor and an academic supervisor. Interestingly, this partnership takes on a slightly different dynamic when the educational institute is also the workplace. The utilisation of BICT students in mentoring roles within UCOL results in this unique cooperative education partnership where the roles of the workplace mentor and the academic supervisor overlap in a way not normally encountered in cooperative education.

Although the UCOL ICT lecturers are experienced within computing education and are often involved with the supervision of students engaging in traditional cooperative education projects, the role of a workplace mentor is a fundamentally new responsibility. Furthermore, this unique situation introduces a number of elements that would not normally arise in a traditional cooperative education environment. These elements include: the overlap of the academic staff member being potentially both a workplace mentor and a supervisor/assessor; the expectation for the student to function and alternate professionally between mentoring and student roles within the institution; professional boundaries (student to lecturer versus collegial relationship); and student privacy and confidentiality. These elements will be discussed further in the following section.

DISCUSSION

The implementation of the mentoring arrangement at UCOL began with an initial discussion between the BICT lecturers and the CITB and CACU lecturers in order to establish a unified understanding of the role of the mentors and how they would be most effective within the existing programme delivery structures. The next step was identifying suitable candidates who were then invited to participate in the mentoring programme for either CITB or CACU. This mentoring programme was run as a Level 7 Special Topic course which allowed students to gain 15 credits towards their programme of study. Students who accepted the invitation then undertook an induction session where mentoring roles were explained and discussed. At this point, a non-disclosure statement was also signed by the student mentors to ensure confidentiality of CITB and CACU student information. Subsequently the student mentors were introduced to the CITB and CACU classes with approximately 1:10 mentor to student ratio. The student mentees also completed a mentoring consent form during this initial introduction. The planned weekly structure for the student mentors involved four main contact points. First, the mentors meet with the UCOL ICT academic staff (this group functions as the workplace mentorship team) at the beginning of each week to discuss student progress, delivery plans, and mentoring requirements with a workplace focus. Secondly, the mentors discuss the mentoring programme from an academic standpoint with their assigned academic supervisor (who is also part of the workplace mentorship team). Thirdly, the mentors attend mentoring sessions with the mentee students. Finally, the mentors provide a progress report via email to the UCOL academic staff members involved with the programme.

The non-disclosure and mentoring consent forms were introduced as a way to ensure confidentiality of student information. The forms were essentially there to emphasise to the mentors that mentee information was confidential and that it should not be shared with the same liberty as other study related materials. This was required due to the privacy obligations within the ICT tertiary education industry, a principle that academic staff are highly cognisant of, yet is new territory for the student mentors.

As mentioned, in a normal cooperative education environment there is usually a clear distinction between the academic supervisor's role and expertise, and the role and expertise of the workplace mentor. However, in this situation, the two roles overlap in a variety of ways. For example, the academic supervisor also participates as part of the workplace mentorship team. Due to the regular weekly meetings between the student mentors, the mentorship team, and the academic supervisor (as part of the mentorship team), all three parties are able to maintain a strong consistent level of communication. This results in a high level of cohesion between the expectations of the student, the workplace, and the academic institution, a factor which is sometimes a challenge in traditional cooperative education situations (Rowe, Mackaway, & Winchester-Seeto, 2012; Bates, Bates, & Bates, 2007).

Interestingly, a challenge emerges when the experience of the student is examined. On the one hand, they are entering a workplace where they are expected to function and behave professionally with co-workers in a collegial type manner, that is, there to help the CITB and CACU students as part of the teaching teams. However, concurrently these students are also studying at the same academic institute and are also required to interact with academic staff on a student to teacher level. As a result, a clear understanding of these two relationships is required on both the part of the teaching staff and the mentor students in order to ensure professional and appropriate interaction is maintained. Furthermore, an additional understanding is required on the part of the

mentor students regarding the mentee students, as they have potential interaction in both mentor to mentee modes and student-to-student modes. Consequently, in order to help understand and manage these relationships the mentor students participated in a boundaries and expectations induction session at the beginning of the programme.

During the development stages of the mentoring programme a number of concerns were also raised by the CITB and CACU teaching team members which included: in class lecturer and mentor dynamics, consistency of teaching, and the level of help that would be provided. Interestingly, a preference arose for the student mentors to work with the mentee students during separate sessions aside from the regular teaching time. Lecturing staff preferred working with the students without the presence of the mentors. This resulted in specifically timetabled study plus mentor sessions for the students where in the lecturers were not present. Teaching staff also had to ensure that the direction and guidance the mentors were providing students corresponded to the teaching methods and concepts provided by the lecturer. This was done to guard against the mentors leading mentee students in alternative directions that may have resulted in unintentional confusion. Finally, the mentor students had to be briefed regarding appropriate levels of assistance in order to emphasis the difference between helping and doing.

IMPLICATIONS

This paper has presented an initial exploration into the potential use of third year degree students as mentors for lower level certificate students from a cooperative education perspective. The traditional cooperative education three-way partnership between the student, the workplace, and the academic institution was found to be uniquely altered when the academic institution became the workplace. As a result, a number of issues resulting from this overlap were identified and discussed. Two key themes identified were the improved communication and cohesion between the involved parties, and the complex interpersonal relationships that result for staff and students involved with the mentoring programme. Although the focus of this paper has been on the ICT tertiary education sector many of the principles and issues discussed could be applied across the tertiary education sector as a whole. Future work will potentially include investigation into staff and student perceptions on the mentoring programme.

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Reflections on Teaching Business Communication by Distance to Tertiary Students

LUKE STRONGMAN

Open Polytechnic, Lower Hutt, New Zealand

An introductory business communication course is taught as part of a Bachelor of Applied Science, Bachelor of Arts and Business qualification within the Open Polytechnic. Students learn a range of skills such as: identifying and analysing elements of human communication process; analysing business communication practices in organisations; evaluating the effectiveness of communication practices; demonstrating interpersonal skills in small groups; demonstrating oral presentation skills; demonstrating the ability to write reports; and conducting independent research. The course is taught via distance learning – students from all around the country enrol to acquire these business communication skills and many of those students are also working either part or full-time. Therefore, optimal teaching techniques need to be used to teach effectively across a range of demographic audiences as well as methods of interaction to inspire workplace engagement.

This presentation will focus on two factors. Firstly, it will highlight the range of skill competencies that students acquire, secondly it will position the course within a cooperative education and Technical and Vocational Education and Training strategy. The implications are that teaching business communication in the cooperative education context draws on values taught in liberal arts education combined with those taught in social science and business. As Cooper, Orrell, and Bowden state, work-integrated learning is characterised by seven key dimensions – these are: purpose, context, nature of integration, curriculum issues, learning, partnerships between university and the workplace or community, and support provided to the student and the workplace (2010, p. 37). Underpinning good business practice in the workplace is a sound knowledge of human, organisational, intercultural, and interpersonal communication.

UNIQUE FEATURES

Successful business outcomes depend on effective communication. 'Business communication' gives students a knowledge and understanding of communication theory so that they can competently analyse and evaluate communication practices as well as being able to communicate effectively in a wide range of business contexts including the current workplaces. The content of the course comprises:

- Communication models,
- Interpersonal communication,
- Intercultural communication,
- Organisational communication,
- Identifying barriers to the communication process in an organisational setting,
- Conducting communication research,
- Working in groups,
- Writing research reports, and
- Presenting oral reports.

The business course is also characterised by service learning which has three foci: Firstly a scholarly agenda (curriculum and learning); secondly, civic engagement (purpose, context, and integration); and thirdly, a partnership between the academy of the community (Cooper, Orrell, & Bowden, 2010, p. 48).

The framework for work-integrated learning produces learners who are:

- Pro-active and self-aware,
- Form productive relationships with diverse people,
- Competent in applying conceptual learning,
- Collaborative,
- Confident community participants,
- Able to balance practical and theoretical expertise,
- Culturally aware,
- Civic minded, and
- Both workers and citizens (Cooper, Orrell and Bowden, 2010, p. 59).

Assignment two involves group work which may produce problem solving at a higher level than might be accomplished by individual students (Millis, 2010; Springer, Stanne, & Donovan, 1999). Assignments three and four involve cooperative learning in workplace situation characterised by metacognitive processing in which students reflect on: a) individual stages of problem solving, b) specific strategies in reaching solutions, c) underlying rationales.

DISCUSSION

If cooperative education and work-integrated learning combines a structured method of combining classroom education with practical work, as Lindberg suggests, a difference between school-based training and work-based training is that most school or college-based training involves solving problems mentally. Whereas vocational educational training is more likely to equip the learner with use of adequate (physical and mental) tools for problem solving (2003, p. 158). Consequently cooperative can provide 'back-up' forms of transitional learning for areas in which completions in traditional forms of education are weaker due to a variety of possible factors (work commitments, accessibility, cost, motivation, etc.). This circumstance may provide additional pathways of learning, that is it may provide academic credit for a structured job experience (Hirvonen, 2011, p. 146), or it can be seen as training between college and work (Lindberg, 2003, p. 158). The two basic components of cooperative education are school or college-based learning and workplace education and these two learning orientations can exist in vastly different contexts but with a variety of learning styles. These different learning styles are characterised by (Stavenga De Jong, Wierstra, & Hermanussen, 2006, p. 156):

- Comprehensive learning style (utilising a holistic strategy),
- Operational learning style (step by step processing), and
- Versatile learning style (alternation between holistic and serialistic strategies).

Whilst learning styles may be characterised by cognitive processing, regulation of learning, mental modelling two standard learning modes are memorising and rehearsing and reflective observation. Consequently learning is a combination of related variables which may involve 'prehension' (concrete experience and abstract conceptualisation) and 'reproduction directed learning' (Stavenga de Jong, Wierstra, & Hermanussen, 2006, p. 158). It also provides a corrective factor for motivational issues in boundary areas in which workplace and career changes may be demotivating – consequently, cooperative education can re-orientate displaced workers into new and emerging employment niches and leverage existing skills and competencies and develop new and applied competencies – which is congruent with the profile and graduate outcome of the business communication course. As Chooppawa, Sirisuthi, Sri-Ampai, and Sripathar suggest, "vocational education emphasises the importance of the connection between innovation in learning knowledge that meets the needs of those entering the labour-market and employees and the needs of employers in the industrial and business sector to equip learners with skills for the innovative use of technologies under changeable market conditions under globalisation" (2012, p. 588). Davies and Ecclestone state that "while it might be thought that the learning culture of vocational courses is uniform and directed by 'hands on' or 'instrumental work', rather than theory-based written work, the concept of learning itself is a 'moveable feast' and there is a continuum of pedagogical design practices for either end of the

spectrum – between creative “free-form” learning and applied methodological procedure of certain kinds of instrumental formal learning” (2008, p. 84).

IMPLICATIONS AND ISSUES

The ‘business communication’ course also draws on the theory of cooperative education within TVET. Technical and Vocational Education and Training is based upon concepts of formal and non-formal learning and training for the purposes of work. It is the term given to the learning design of knowledge and skills from beginning to advanced levels in preparation for a range of organisational and work settings in changing and often dynamic socio-economic contexts. As Darwin states, “It is axiomatic that the changing nature of work and learning means the vocational educator is now increasingly in an essential role in cultivating the skills necessary to sustain ongoing learning beyond the immediate learning environment” (2007, p. 67). The three main drivers of the skills taught in vocational education and training are elevation of poverty, economic advancement, and sustained development but these are combined with short-term goals of equipping learners with knowledge required for the workforce – trades, technical know-how, and the professions as well as with skilled development and education. The increasing importance of cooperative education is in the provision of contingency capability in an increasingly mobile workforce. Programmes of Cooperative Education and Vocational Education and Training are implemented by a variety of organisations – Universities, Polytechnics, Private Training Establishments, and Industry Training Organisations. Furthermore, workplaces, including government organisations, small and large businesses, and industries and not-for-profit organisations, are important contexts for the professions and for cooperative learning (Cooper, Orrell, & Bowden, 2010). Work-Integrated learning is the “application of formal theory with real-world problem solving, abstract thinking and practical action, and discipline-specific and vocational skills (Cooper, Orrell, & Bowden, 2010, p. 40). As Wang states, “Work-based learning . . . responds to the dynamic of organizational changes in pursuit of profitability, flexibility, and knowledge-based workforce. Organisations’ and institutions’ stakeholders have used-work based learning as a key strategy for sustainable competitive advantage in the new globalised economy” (2008, p. 189). Within this concept, courses such as ‘Business Communication’ provide integrated learning. Thus, vocational and educational training is a programme, strategy and even economic imperative of both the education and business sectors, as well as forming a part of government policy in some European countries.

Both cooperative education and technical and vocational education and training is useful in times of economic downturn or for the rapid mobilisation and upskilling of sectors of the economy undergoing change and transformation. It is also a concept which emphasises and leverages the increasing quality of human capital for the purposes of sustainable labour market needs, to meet the demands of areas of new growth, to provide for new skills and jobs, and to reduce the social impact of recession or conditions of social and economic poverty. Cooperative and technical and vocational education and training also aims to meet learners and employers needs for a range of qualification and abilities, from basic to medium to high level qualifications. As Acevski, Acevska, and Fahlberg-Stojanovska state, “[v]ocational education focuses on achieving skills and knowledge necessary for real-world industries. In vocational schools students gain practical experience, develop and improve entrepreneurial and employability skills . . .” (2012, p. 8). Increasingly cooperative education within Technical and Vocational Education and Training employs strategies for training that are driven by information and computer technologies – products, processes and procedures. These are in demand for the ‘low-carbon’ economy, for sustainable development, and they are useful for the restratification and geo-dispersement of complex labour markets in societies whose economic and social structures are developing and/or changing. These labour markets are also characterised by service learning (Jacoby, 1996), which is a form of experiential learning in which students “. . . go through a cycle of experience, reflective observation, conceptualization, and active experimenting on the basis of experience” (Cooper, Orrell, & Bowden, 2010, p. 47). It is similar to situated learning which involves students participating in a work environment in a series of collaborative social interactions with other workers – as such, learning depends on activities, social and cultural norms, and values and attitudes in the workplace (Lave & Wenger, 1991; Cooper, Orrell, & Bowden, 2010, p. 41).

CONCLUSION

The cooperative educational provision of Vocational and Educational Training involves instruction using new pedagogies, curriculum design, quality assurance and convergence of roles of education and training, providing competencies and funding for lifelong learning and success in individual careers (European Commission, 2010, p. 7). In doing so, cooperative education within vocational and educational training aims to facilitate an efficient and relevant response to labour market needs, promotes equality and active citizenship, and promotes values of innovation, creativity, entrepreneurship, e-learning, ICT, international cooperation, lifelong learning and study, and equity and social cohesion (European Commission, 2010, p. 11). As Hirvonen suggests, “. . . the education system has never been an isolated island separated from society” (Hirvonen, 2011, p. 141). Fundamental values of education are “commonality”, “equality”, “equal opportunity” and the availability of relevant and quality learning for people of all ages and backgrounds, and all demographic characteristics (Hirvonen, 2011, p. 141). It is also a characteristic of the vocational education movement that it provides for learners at all stages of career development – including “prevocational educational options” for learners who require reflection and work practice before pursuing further training for career options as well as for self-employment and further studies (Hirvonen, 2011, p. 141). Along with increasing use of ICT (information and Computer technology) skills in vocational education training comes the recognition that in the distance learning paradigm, learning is not necessarily tied to a specific place, out of college environments as well as virtual learning provide possibilities for the individualisation and flexible provision of education in more readily accessible ‘open environments’ – some of which might also be in the workplace. This is tempered by the fact that some open educational environments may be perceived as too challenging – particularly for students with special needs who require tutoring, guidance and supervision (Hirvonen, 2011). However, all workplaces have their challenging moments and ‘business communication’ teaches students to understand and face these challenging moments with knowledge and skill.

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Achievement, Retention, Transitions: New Zealand's Youth Guarantee Initiatives

JOSH WILLIAMS & OCTAVIA PALMER
Ministry of Education, Wellington, New Zealand

Like many countries around the world, New Zealand is focussed on the issue of successful transitions to employment for our young people (McKinsey & Company, 2014). "Youth Guarantee" refers to a major policy programme, progressively rolled out since 2010, which aims to provide young people with relevant choices and clearer pathways to further study and employment. Schools, tertiary providers, and employers are being encouraged to work together in new ways to provide opportunities for learners to be equipped with the skills and knowledge valued by employers, otherwise known as foundation and vocational education (Ministry of Education, 2013).

Youth Guarantee represents a series of connected initiatives designed around a common goal (the achievement of Level Two National Certificate of Educational Attainment (NCEA) or equivalent by 18 year olds). Youth Guarantee includes a range of programmes including fees-free places, Vocational Pathways and Trade Academies which will be discussed further in the paper (Ministry of Education, 2013). Programmes provide more relevant and contextualised learning, integrating New Zealand curriculum-based learning and technical and vocational education and training (Ministry of Education, 2013).

BACKGROUND

Youth (people aged between 15-24) not in employment, education or training (NEET) account for 11.4 percent of the New Zealand population (Statistics New Zealand, 2013). While this rate has been decreasing, it is nearly double total unemployment. Youth unemployment is especially prevalent in Māori and Pasifika communities. The social and personal costs of the NEET population cannot be underestimated; being a NEET is associated with lower earnings; greater reliance on social assistance; and higher rates of unemployment, criminal offending, substance abuse, suicide, homelessness and mental or physical ill health (Ministry of Social Development, 2003).

International research has found that policies and programmes that are successful at decreasing youth unemployment are those that promote accessible and affordable education that improves employment readiness, otherwise known as foundational education (McKinsey & Company, 2014). Foundation education is generally considered to be education at Levels One and Two on the New Zealand Qualifications Framework (including both tertiary certificates and NCEA) that provides the basic skills required for progression into higher level academic or vocational study, employment and training.

Engaging disconnected young people is achieved by making studies relevant through contextualised learning; when teachers relate subject matter to real-world situations (Ministry of Education, 2013). Contextualised learning can be viewed as powerful *transition pedagogy* due to, unlike purely theoretical/academic learning, its focus on 'practical, embodied and relational aspects' (Higgs, 2012). Especially for underrepresented groups, according to Devlin and O'Shea (2011), one of the four elements that strengthen their commitment to a course is 'students' own behaviour and/or attitude', which improves when learning is grounded in reality.

Student retention, engagement, and confidence, especially for those from priority groups, are improved through contextualised learning. Australian research found that first-year university students from underrepresented groups who participated in work-integrated learning (WIL) were more likely to remain in their courses in the future (McEwan & Trede, 2014). Taking part in WIL has also been shown to increase students' confidence in setting and attaining goals (Purdie, Ward, McCadie, King, & Drysdale, 2013). In addition, contextualised learning fosters skills and competencies including decision-making, leadership, interpersonal and self-management skills

and professional networking and behaviour (Costley, 2007; Crebert, Bates, Bell, Patrick, & Cragolini, 2004; Dreuth & Deuth-Fewell, 2002; Lizzio & Wilson, 2004; Rickard, 2002).

YOUTH GUARANTEE PARTICIPANTS

The Youth Guarantee is focused on the 70% of young people who do not progress to degree level education with a particular focus on priority groups. Priority groups are defined by the Ministry of Education as students with one or more of the following characteristics; of Māori or Pasifika ethnicity, from low socio-economic communities (attending a decile one-three school) and special needs (Ministry of Education, 2013).

Most of those participating in the fees-free and secondary-tertiary programmes had lower levels of achievement at NCEA Level One and more than half had experienced disengagement from school. Disengagement is defined as having at least one experience of disengagement, for example, a stand-down, suspension, or serious truancy. Also, schools with high proportions of Māori and Pasifika students were targeted to support the goals of Ka Hikitia (the Ministry's Māori education strategy) and the Pasifika Education Plan (Ministry of Education, 2014).

YOUTH GUARANTEE INITIATIVES

Fees-Free Places in Tertiary Education

Fees-free places in tertiary education enable young people who decide school is no longer appropriate for them to achieve NCEA Level Two or an equivalent qualification in a tertiary environment. Students undertake full-time study in programmes which are typically vocationally focused (Ministry of Education, 2013).

Vocational Pathways

Vocational Pathways were initiated by industry and developed by a constructive partnership between government, education, and industry. They enable students and teachers to shape their learning programmes to align with the standards valued by industry sectors (Ministry of Education, 2013).

There are currently five vocational pathways covering:

- Primary industries,
- Construction and infrastructure,
- Manufacturing and technology,
- Social and community services, and
- Services industries.

A further pathway is currently under development for the creative industries (Ministry of Education, 2013). NCEA Level Two results include a vocational pathway profile that helps students, whanau, and employers to identify what if any pathway has been achieved.

Secondary-Tertiary Programmes (STPs)

STPs enable young people to undertake a combination of school and tertiary study while they are still at school. They are focused on achieving NCEA Level Two and credits towards industry set Level Two National Certificates. STPs are aimed at young people who have remained at school.

The most common form of STP is the 22 Trades Academies. Working in conjunction with Vocational Pathways, Trades Academies deliver trades and technology programmes to secondary students based on partnerships between schools, tertiary institutions, industry training organisations, and employers (Ministry of Education, 2013).

Youth Guarantee Networks

The networks comprise schools, tertiary providers and the wider community in a particular area working together to develop new learning programmes based on the vocational pathways and to make the most efficient

use of their combined resources. Most are currently in an early stage of development (Ministry of Education, 2013).

CONTEXTUALISED LEARNING

Contextualised learning is integral to the Youth Guarantee philosophy. A case in point is Auckland West Vocational Academy, based at Massey High School, which expects carpentry students to build a 65m² house during the course of the year. To complete the project students worked extended hours, some Saturdays, and four extra days in the school holidays (Ministry of Education, 2013).

Another example is Papakura High School Health and Sports Science Academy that prepares students for study at tertiary level and entry into health-related careers by integrating all learning around health/sports themes. Teachers recognised the overlap between human biology (science) and sport (physical education and health), and were able to avoid duplication of time and effort when teaching content and skills, in this way freeing up time that can then be used to go deeper. For example, students may give a speech on diabetes [English], having learnt about diabetes in human biology. This means that the focus of their speech preparation is on speaking [as it should be], not content (Ministry of Education, 2013).

Flexible timetables have been developed to allow students to maximise their time in the trades academy programmes. Amuri Area School students participate in the trades academy programmes offered by the Canterbury Tertiary College in Christchurch. These allow senior students to spend two days a week in Christchurch doing their multi-trades course while attending a mix of four-hour, two-hour and hour long core-subject classes during the remaining three days (Ministry of Education, 2013).

SYSTEM-LEVEL MONITORING OF YOUTH GUARANTEE

The outcomes used to assess the success of YG programmes are:

- Retention in education and training,
- Achievement of NCEA Level 2 (or equivalent),
- Progression to tertiary study and skilled employment, and
- Sustainable system level change which empowers young people to move successfully into a range of post-school education and employment options (Ministry of Education, 2014).

Fees-free (previously Youth Training) and STP policy was recently evaluated against the first three outcomes. Progress towards the outcome areas is monitored by tracking and comparing year-of-birth cohorts of students through the education system and beyond.

Key findings of the report are that fees-free places and secondary-tertiary programmes were both effective in retaining young people in education. Fees-free places are resulting in more young people attaining NCEA Level Two or equivalent. Secondary-tertiary programmes are adding further to this contribution. Such system-level monitoring will continue in the future and will reveal the success of recent developments in the Youth Guarantee space.

WHERE NEXT

While system-level monitoring of Youth Guarantee will continue, there are opportunities for future research about the specifics of the implementation and outcomes of the programmes. Interesting avenues for study include case studies of Youth Guarantee networks and Trade Academy participants and programmes, and qualitative studies of student engagement.

It is likely in 2013 that the contribution of Youth Guarantee programmes to the attainment of relevant foundational qualifications will further increase (Ministry of Education, 2014). Youth Guarantee programmes have had little impact so far on the proportion of young people going on to Level Four and above study after leaving school. It is probable this will improve from 2013 onwards due to signs of improvement in fees-free

places. The second cohort through fees-free, who were 18 in 2012, were more likely to have gone on to study at Level Four and above than other students with similar background who had not participated in fees-free. Assuming this trend continues then progression rates should improve (Ministry of Education, 2014).

To increase transitions to tertiary study (Level Four and above) from 2015 NCEA Level Two results for 2014 will include a vocational pathway endorsement when this has been achieved (Ministry of Education, 2013). Also, schools and tertiary providers are currently planning the development of learning programmes based on the vocational pathways, some of which will be offered from 2014. It is expected that learning programmes based on the vocational pathways will be more widespread from 2015 (Ministry of Education, 2013).

Youth Guarantee programmes have been shown to improve educational outcomes for 'at-risk' students. The skills learnt in these programmes will allow young adults to not only pursue a vocational pathway but will also hopefully foster lifelong learning. What remains to be seen is whether Youth Guarantee increases progression to future study (especially at Level Four and above) and employment.

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How High is the Gloss on Cooperative Education Posters?

YVONNE WOOD, ERWIN LOSEKOOT, LINDSAY NEILL, & JANE A. LEGGET
Auckland University of Technology, Auckland, New Zealand

The use of posters as an assessment tool in cooperative education was one aspect of a recently published paper focused on the use of posters in tertiary education (Legget, Losekoot, Neill, & Wood, 2014). The original paper by Legget et al. (2014) focused on poster assessments across three papers within a department of hospitality and tourism management within a university in New Zealand. This paper considers the cooperative education view that was gathered from academic staff and student feedback on the use of poster presentations, highlighting the rationale for using posters, challenges in implementing posters as a form of assessment and student responses to posters as a summative assessment tool. In cooperative education, poster presentations replaced a previous assessment using PowerPoint.

METHOD

This paper focuses on the use of posters to report on the cooperative education experience, whereby students make connections between their work assignment, the literature and reflections on their experience. The use of poster assessments in general is more substantially reported on in Legget et al. (2014) where the research developed organically from a discussion between colleagues about the use of poster assessments across a range of papers.

Specifically, colleagues in a department of hospitality and tourism management within a New Zealand university have shared in the practise of using and co-assessing summative poster assessments. Information was gathered from student feedback and a review of the experiences of academics that currently use posters as an assessment tool. Due to shared marking practices within the school, lecturers were familiar with each other's poster assessments and had many insights to share. The study was carried out over the course of one semester, but there is no intention to generalise from this one case study in one institution. It was an exploratory study and from that study common elements that pertain to the cooperative education data have been presented in this paper.

LECTURER PERSPECTIVES

The lecturers involved in the study about poster assessments identified their motivations for the use of posters (Legget et al., 2014). The reflections raised by the lecturers although not all from cooperative education, are consistent with motivations that are recognised by the lecturers in cooperative education.

The reason for using posters was to shift away from PowerPoint. Multiple reasons were given to support this shift, lectures were not sure of the effectiveness of PowerPoint presentations, there were concerns about PowerPoint fatigue (high similarity between presentations and often not reflective of student abilities). Student anxiety limited their ability to do a worthwhile oral presentation, which was a consequence of a large non-English-speaking background student (NESB) cohort. Sitting through other students' PPT elicited a collective groan and was not seen as a positive learning experience for neither the student presenting nor the student audience.

The benefit of a poster was that it is a highly synthesised assessment, it forced the students to think about how to communicate with and engage their target audience, especially since their audience may also view their work independent of the student (for example at a showcase event). It allowed for a different type of communication for those who were perhaps not so strong in their communication skills. Students were required to discuss their poster with an assessor that meant that they could further demonstrate the depth of their knowledge (beyond

what was on the poster) “in what one academic on the team called a guided conversational environment” (Legget et al., 2014, p. 96). The need to print the posters ensured that there was a definite end point, when the design phase was finished and the emphasis shifted to the presentation.

There was an appreciation of the visual impact of posters presented side by side, that sequential PowerPoint presentations could not replicate. This allowed students to further connect with what they had produced and reflect on the value of their own work. The poster was only one element of the assessment for cooperative education students. This one element was the final piece of assessment and was rolled into a capstone event called the poster showcase that was concluded by inviting industry mentors to view all student posters prior to a celebration cocktail function to conclude the studies for the students. In the eyes of the students, having a wider audience (beyond the standard lecturer in the classroom) was felt to be valuable and added credibility to the assessment. In cooperative education, the visitors from industry were invited to make comments to the student after their assessment although the allocating of recorded grades was restricted to academics who were familiar with the learning outcomes for the paper.

Posters were introduced to students with the use of exemplars from previous students. Often students would ask to photograph the posters. When students were introduced to the task, they were asked to consider the different audience requirements between the written report and the poster assessment. It was emphasised that the poster was an opportunity for creative work with an emphasis on the elements of structure and logical flow in the assessment.

STUDENT PERSPECTIVES

A number of themes from the student feedback data were identified in this study that built on the themes of student learning, feedback opportunities and the relationship between the assessment task and learning. Specifically the data reporting both positive and negative aspects of creativity, research skills, assignment variety, ease of completion and cost from cooperative education students are reported on in this paper (Table 1).

TABLE 1. Student feedback themes (adapted from Legget et al., 2014, p. 97).

<i>Creativity</i>	<p>A comment made by many students was that the poster presentation allowed creativity in terms of control over the finished product, the images used, and the ability to design a visually appealing piece of work. They also highlighted the importance of having clear specifications. Comments included <i>‘telling a story based on pictures and charts’</i>; <i>‘not the usual PowerPoint presentation’</i>; <i>‘creatively showcasing the project’</i>; <i>‘using photos, graphs and graphics to emphasize what I have learned’</i>; <i>‘hands-on work always suits me best’</i></p> <p>There were also some negative experiences, mainly around lecturer expectations and technical knowledge – <i>‘not knowing how to use the MS Publisher and Photoshop programs’</i>; <i>‘deciding the layout’</i>; <i>‘not being able to put all the information in’</i>; <i>‘not really necessary for non-art-related papers’</i>; <i>‘requirements for the poster’</i>; <i>‘only a few will read it so what is the point’</i>; <i>‘don’t learn any more from a poster than writing a report’</i>.</p>
<i>Research skills</i>	<p>Students were quite quick to understand the underlying transferable skills that lecturers were seeking to develop. Skills identified included information sourcing, summarizing key data, presentation and communication of findings and the ability to use software packages. Comments included <i>‘I learnt way more than expected’</i>; <i>‘good way to summarise a report’</i>; <i>‘selecting the font and image etc. to fit the theme’</i>; <i>‘I really improved my confidence’</i>; <i>‘enjoyed talking in English in front of people’</i>; <i>‘learning about logical flow of information’</i>; <i>‘highlighting key points’</i>; <i>‘having to work outside my comfort zone’</i>; <i>‘more visual and kinetic learning’</i>.</p> <p>As expected, some students could not see the benefits – <i>‘I felt like I was back in school’</i>; <i>‘Powerpoint would be better/more interesting’</i>; <i>‘I don’t like talking in front of people’</i>; <i>‘time-consuming’</i>; <i>‘after printing it you realize there are mistakes that have not been fixed’</i>.</p>

<i>Assignment variety</i>	<p>Comments around assignment variety were that it was good to be asked to do something different to essays or reports. In one case the student commented <i>'I learned more from posters more quickly than I would from doing an essay/report'; 'not too lengthy as reports and assignments are'; 'being able to present your ideas to others in a visually attractive format'; 'closer to reality'</i>. A number of students certainly seemed to be as fed up with interminable PowerPoint presentations as the academics discussed in the literature review section of this paper.</p> <p>For some this was a new experience <i>'I found this paper so hard as the approach of the paper is new to me'</i>.</p>
<i>Ease of completion</i>	<p>One comment which was made regularly was that <i>'assessments were challenging but fair'</i>. A number of students also commented that it was a <i>'good way to end the paper/my university studies'</i>. Having the poster session as a capstone event for the degree gave it a sense of occasion and pride.</p> <p>A number of students seemed to feel that completing the posters was less work than they would have to do for other types of assessment, although in most cases students had to produce a written report (containing the information that would not fit on the poster) as well. Somewhat worryingly, this reality was not reflected in their posters feedback!</p>
<i>Cost</i>	<p>Streamlined university print service process have been developed.</p> <p>Comments around the cost of producing the posters were mostly negative: Common ones included <i>'cost should be included in course fees'; 'too expensive to print'; 'having to print it twice after getting it wrong'; 'waste of resources as so few will read it'; 'not an environmentally-friendly exercise'</i>.</p>

DISCUSSION

The benefits of posters assessments in the literature highlighted an increased motivation through perceived interest and enjoyment of the task (Ohaja, Dunlea, & Muldoon, 2012), sense of personal achievement (Stegemann & Sutton-Brady, 2009), and motivation to produce a quality poster for the intended audience (Erekson, 2011). These benefits were consistent with the student feedback highlighting creativity and assignment variety and the lecturer reflections about the desire to shift away from PowerPoint presentation and visual impact of posters.

Pedagogically, the literature emphasised posters in the application of; critical thinking and analysis skills (Moule, Judd & Girot, 1998), conciseness (Stegemann & Sutton-Brady, 2009), and increased engagement and active participation with the assessment task (Dogan & Kaya, 2009; Erekson, 2011). From our research there was a recognition of the research skills inherent in the assessment task, which lecturers attributed to the highly synthesised nature of the work. Posters challenge the intellectual, spatial and design thinking skills of students and are consequently aligned toward the cognitive theories of learning. Posters provide a vibrant assessment space enabling and empowering students to show their clear and concise grasp of the concepts required within the assessment.

The potential stress, confusion and nervousness that students may encounter when introduced to the requirement of a poster assessment are reported on in the literature (Erekson, 2011; Stegemann & Sutton-Brady, 2009). It is suggested in this research that poster assessments are successful when lecturers communicate their relevance to the subject, the learning outcomes, and make students aware of their likely costs and the expectations within presenting a poster.

To ensure that the gloss does not come off this form of assessment, it is important to ensure that assessment fatigue does not develop (Orsmond, Merry & Sheffield, 2006; Stegemann & Sutton-Brady, 2009). Addressing student preconceptions about ease of completion, the challenging yet fair assessment combined with a capstone event to conclude their studies is one way in which to address this concern, together with inviting a wider audience to the view the posters. In providing new considerations, our research promotes the poster as an equal

alternative to more traditional assessment formats because it engages students in a wider domain of intellectual interactivity.

This interactivity is with other students or within enhanced relationships with industry mentors and family and friends who are interested in the student's academic progress. Student learning benefits through this deeper engagement because it is reflected within their task. For students, the poster concept can be a welcome change to traditional forms of assessment. This is a vital consideration in vocational study areas and in particular the synergy with cooperative education. This aligns our recommendations of posters as an assessment medium not only with the desire to enhance the learning experience for students, but also to the wider domains of experience, exemplified by research into the "experience economy" within the context of hospitality and tourism (Pine & Gilmore, 1998; Hemmington, 2007).

CONCLUSION

This study has reported on reflections from lecturers and student feedback about the use of posters as a student assessment tool in cooperative education. It has hopefully summarized for others what is already known, highlighted some of the pitfalls, and perhaps given some encouragement to try this still underutilized method of assessment.

Our research concurs with existing literature on using posters as an assessment tool, specifically in that posters provide a vibrant assessment space that allows students to demonstrate their clear and concise grasp of concepts in a challenging yet fair form of assessment. The poster assessment is found to be an equal alternative to traditional forms of assessment especially pertinent to practice-based study areas such as hospitality and tourism management and specifically for cooperative education in this domain. These benefits were especially appreciated in the capstone cooperative education paper where industry was also invited to view the posters at the final assessment event for the degree.

We suggest that further research linking posters as an assessment tool, especially within hospitality and tourism studies, concentrates upon maximizing their use within learning's "guided conversational environment". We recommend this because hospitality and tourism posters appeal to the positive and creative intellectual differences within a student cohort, and reflect the "doing" or operational aspects of the industry. Specifically, we recommend poster use because it mirrors what industry professionals do within employment—creating scenarios within which customers engage in multisensory ways. This form of applied learning may also be strongly connected with other cooperative education programmes. The authors would welcome the opportunity to collaborate on further research with colleagues focused on the use of posters in cooperative education.

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Students' Perceptual Change of Professional Ethics after Engaging in Work-Integrated Learning

KARSTEN E. ZEGWAARD

University of Waikato, Hamilton, New Zealand

MATTHEW CAMPBELL

Queensland Institute of Business and Technology, Brisbane, Australia

When students undertake work placements, they become immersed in a relevant community of practice, where they are required to meet the social demands to perform within the norms of this community. These expected norms are shaped by several community aspects, such as cultural beliefs, ethical considerations, and moral positions. The workplace experiences are also where students start to shape and understand their own identity as a professional and their professional morality and ethics. With increasing industry demands for work-ready graduates (Archer & Davison, 2008; Lomax-Smith, Watson, & Webster, 2011), there needs to be consideration that 'work-readiness' includes professional identity and professional ethics. Identity development is strongly related to how a student engages with professional work-life (Reid, Dahlgren, Peticz, & Dahlgren, 2008). Perhaps not surprising then that increasingly values education, enhancing ethical knowledge and conduct, and professional identity development are being seen as important facets of student development (Campbell & Zegwaard, 2011a; Herkert, 2000; Keown, Parker, & Tiakiwai, 2005; Trede, Macklin, & Bridges, 2011). However, students engaged in undergraduate studies, tend to hold narrow conceptualisations of professionalism (Grace & Trede, 2011). The literature argues that to have effective development of professional ethical awareness and practice, then explicit emphasis must be placed in the curriculum on the learning and development of professional identity and professional ethics (Campbell & Zegwaard, 2011b; Trede, 2012).

METHODS

The aim of this research was to determine students' pre- and post-work placement understandings and experiences of professional ethics and workplace values as they embark on a science and engineering work placement.

Data was collected using online surveys, through LimeSurvey® software, and one-to-one, semi-structured, audio recorded interviews. Participants were surveyed one month prior to commencing work placement ($n = 31$, 26% response rate) and one month upon completion of the work placement ($n = 27$, 28% response rate). The survey instrument asked students to respond, using ordinal 10 point Likert scales (where 10 = strongly agree) to a number of statements. An invitation was made to take part in a 45 minute interview, which collected four self-volunteered participants, who were interviewed in the first week of work placement and two weeks after the placement was completed. Interviews were audio recorded and thematically analysed. This research has ethical approval granted by the human ethics committee at University of Waikato.

Gender distribution of participants were 58% male and 41% female (reflecting engineering, and to a lesser extent science, being male dominated) with 95% being aged between 19 and 22 years. Participants were predominantly European (66%), followed by New Zealand Maori (8%), Asian (12%), and other (14%). When the survey Likert data was subjected to the Cronbach's Alpha reliability test, the results indicated strong internal consistency with low variance (pre-placement $\alpha = 0.92$; $\bar{x}SD = 2.01$; post-placement $\alpha = 0.81$; $\bar{x}SD = 2.35$). A comparative demographic analysis of survey respondents to the sampling cohort indicates the respondents are representative of the sampling population.

RESULTS

Pre-Placement

Discussion of the pre-placement data was presented at a previous NZACE conference (Zegwaard & Campbell, 2013). Most significant findings of the pre-placement data were that students were not convinced that they had a sound understanding of their professional values (Likert 5.83), tended to believe that professional ethics were complex (Likert 6.73), were unsure if personal values would conflict with professional values (Likert 4.47), and were unsure if they could positively change the ethical behaviour of the workplace (Likert 5.93). Students thought they generally behaved ethically (Likert 7.94), however, were unsure if society had good values (Likert 5.10). Students did not think they struggled to determine the right ethical choice (Likert 3.42), however, when asked the same of others around them, students were less convinced (Likert 5.03).

Post-Placement

After their work placement, students felt that the placement had improved their understanding of professional ethics (pre-placement Likert 5.83; post-placement Likert 7.24; $p < .05$). Students believed their own ethical conduct during their placement had mostly reflected their personal values (Likert 8.26) and did not believe their professional values conflicted with their personal values (Likert 3.48). Pre-placement interview data suggested that students thought professional ethics were essentially personal ethics applied in a professional context, and when this statement was included in the post-placement survey, students agreed with this statement (Likert 7.52).

However, some views did not change after the placement. After the work placement, students did not think they struggled making the right ethical choice (Likert 3.42), however, thought others may struggle more, for example, other students (Likert 4.48), their colleagues (Likert 4.15), and 'others around them' (Likert 5.27). These views are similar to pre-placement views. Half of the students indicated that they observed, or were aware of, unethical behaviour in the workplace. Rather concerning, after the placement experience, students tended to be less inclined to speak up if they saw something unethical happening (pre-placement Likert 7.60; post-placement Likert 6.58; $p < .05$).

Students still believed they adhered to good values (Likert 7.65), however, their view of society around them generally having good values was unchanged (pre-placement Likert 5.10; post-placement Likert 5.38; $p > .25$). When asked post-placement if professional ethics was complex, students still agreed to the same level as before placement (pre-placement Likert 6.73; post-placement Likert 6.68; $p > .45$).

Despite students thinking they had mostly positively impact the workplace values (Likert 6.48), that they always made good ethical decisions (Likert 7.17), and that they believed the experience will result in them responding differently in the next workplace (Likert 6.70), students still held the same level of uncertainty on their ability to positively impact the values at the next workplace (pre-placement Likert 5.93; post-placement Likert 5.76; $p < .35$).

DISCUSSION AND CONCLUSION

Students who had undertaken work placements reported mostly positive experiences engaging with professional ethics and workplace values, including that they believed they had successfully and positively impacted workplace values. However, the data suggests that they had not yet fully appreciate the complex relationships between professional conduct and personal values.

Prior to placement students indicated that they were unsure whether they would positively impact the workplace values, however, after placement, students felt they had positively shaped practices in the workplace. It is, therefore, conflicting that students then held the same level of uncertainty about being able to positively impact the next workplace. This may be indicative of student lack of realisation of personal agency, that is, they did neither realise their agency during placement nor recognised their ability to be agentic in the next placement. Students holding a similar view after placement that professional ethics were complex support this idea of lack of realisation.

Interestingly, prior to their first work placement, students indicated that they would readily speak up if they saw unethical actions in the workplace, even if speaking up offended others; however, this readiness to speak up significantly declined after the work placement experience. This seems surprising, given students thought they had positive experiences. However, this decline may partially derive from uninformed, naïve, or idealistic views students held of workplaces which, when confronted with the socially complex nature and individual power differentials, created greater hesitancy to speak up. This concept here would tie into the previous ideas about the realisation (or lack therefore) of personal agency and their ability of personal agency.

The workplace experience did not change students' views of the lack of ethical capacity of those around them. Such a perception of oneself being morally and ethically better than others, is in contrast to the generally accepted view that individuals tend to judge themselves harder than others (Kirshenbaum, 2008). However, Trivers (2011) argues that in regards to moral status, individuals not only judge others more harshly, they are quicker to forgive themselves for moral indiscretions than others for the same offense. It may well be that students, having seen some unethical behaviours in the workplace, re-enforced their perception of others around as having a lower moral capacity because of knowledge of their peers activities, coupled with a greater readiness to forgive oneself rather than others. The challenge presented here to the teaching of ethics is that students may express inertia to learning, and quickly dismiss alternative and externally offered challenges to their own ethical positioning if they already believe they are ethically, and morally, superior to others.

These findings presented here highlight key considerations for the relationship between workplace experiences and student ethical development; however, there is still a gap in demonstrating the causal relationship between particular elements of workplace experiences, and student moral and ethical development. Thus, this paper also highlights the need for significant further research to better understand some of the complex development students undergo in regards to professional identity development, professional ethics awareness, and students' awareness of their ability to be agentic in the workplace.

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