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Denise Jackson
Edith Cowan University

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Students' and their supervisors' evaluations on professional identity in work placements

As the world-of-work evolves with globalisation, automisation, labour mobility and the casualisation of employment (CEDA 2015; FYA 2016), the demand for agile and employable graduates continues to grow. In recent years, we have seen a shift to a broader concept of graduate employability that extends beyond the 'skills approach' (see, for example, Jackson 2016; Tomlinson 2012). One of employability's many dimensions includes the extent to which an individual envisions him or herself as a professional, meaning their professional identity (PI) (Bennett 2012; Stevenson and Clegg 2011). This refers to individuals internalising professional values, beliefs and attributes (Nadelson et al. 2017), finding meaning in their work and connecting with the conduct and practices associated with professional roles (Ibarra 1999). In this sense, an employable individual encompasses "a self that has been developed with the commitment to perform competently and legitimately in the context of the profession" (Tan et al. 2017, 1505).

Students transitioning to the workforce must connect with their intended profession and 'become' professionals (Jackson 2016). They must feel confident and suitably equipped to consider themselves worthy of graduate-level employment (Holmes 2015). Jackson (2017) draws on Baxter Magolda's (1998) self-authorship framework in describing the stages that students must transition through in their development of what she terms 'pre-professional identity'. Others (Creamer and Laughlin 2005; Pizzolato 2005) have also used self-authorship as a framework to conceptualise PI in higher education (HE) students. At the first stage in the framework, students develop a basic understanding of the norms, expectations and values in order to frame their behaviour so it is appropriate for their chosen profession. They then progress through stages where they are no longer accepting that every way shown to them is correct but instead questioning existing knowledge and practice. They seek effective ways of doing things and start to develop the stance of a critical practitioner. Finally, they become 'immersed' in their profession, collaborating with others and actively contributing to change and new ways of working.

Identifying effective interventions in HE to nurture student employability, including PI, has attracted considerable attention and resources in recent years. For PI development, Hodges et al. (2009) outline the importance of student-centred learning - such as capstone experiences, role-plays and small group debates - in encouraging students to make sense of existing knowledge as well as making meaning of their own. Such pedagogical practices can help students develop the confidence to find and use their own voice in asserting their values, knowledge and expectations in potentially controversial scenarios. Authentic learning is also important for developing PI,

exposing students to the values, conduct and expectations of the professional environment. It would therefore make sense that models combining classroom and workplace learning are important for PI development, such as experiential learning, cooperative education and work-based learning. The Australian-centric term Work-Integrated Learning (WIL) encompasses authentic activities where students undertake, and are assessed on, engaging with industry or community partners as part of their degree studies. WIL comes in two broad forms. Immersed WIL is where students are physically based in the professional setting, such as work placements, practicums and internships. In contrast, non-immersed forms include virtual placements, simulations and industry or community-based projects that are typically conducted remotely or on-campus. The National Strategy for WIL (Universities Australia et al. 2015) has highlighted the need for increased stakeholder engagement and resourcing to progress this valuable platform for preparing graduates to succeed in the workplace.

This study first aimed to gauge student capabilities in PI from the perspective of both the WIL student and their workplace supervisor. Second, it aimed to explore the value of WIL as a platform for developing PI. The research objectives were to (i) explore any differences in student and supervisor perspectives of the PI capabilities of students completing a WIL experience; (ii) identify any differences in PI development by students' individual characteristics; (iii) examine any changes in PI capabilities arising from the WIL experience; and (iv) identify challenges during WIL for PI development. The term 'capabilities' is the used in the study, arguably, encompasses skills, attributes, traits and abilities. The WIL experience in this particular study was the completion of a work placement in a professional setting. The paper first provides a theoretical background, followed by an outline of employed methodology. The presentation of results is followed by a discussion of the findings and implications for practitioners. The paper concludes with a brief summary of key findings, contribution to the field, directions for future research and a review of the study's limitations.

Background

In the context of enhancing graduate employability, it is important to consider PI among HE students, including how it is developed and whether it varies by individual characteristics.

Professional identity and employability

Early stages of PI, as defined by Baxter Magolda (1998) and Nadelson et al. (2017), involve individuals observing and 'following' professionals in their completion of tasks in the workplace. Increased exposure will help them to

understand the ideology of professional life, including the norms, values and expected code of conduct, and the professional self they are aspiring to. Once individuals have learnt how to behave appropriately as a professional, they progress to the 'questioning' phase where they start to query what they see and experience in their working environment. For a student, this may involve comparing the realities of practice with textbook learning and questioning the superiority of alternative methods. This requires strength of character and self-direction as they reflect on what they are experiencing, relate it to previous experiences – in particular campus learning – and critically evaluate what they are being exposed to. Managing differences may cause tension among students (Izadinia 2013) but is important in order for them to progress to the 'self-authored' phase (Baxter Magolda 1998). Here, they start to release the confines of their personal context and values and make a meaningful contribution to their professional community through collaboration, idea generation and new ways of doing.

As one progresses to the advanced stages of PI, it is important to develop congruence between one's professional and one's general self. Here, the individual absorbs their subordinate professional self into their general self, a complex, negotiated process that requires reflection and self-awareness (Fellenz 2016). Indeed, individuals may experience internal conflict when they encounter values and practices in the professional environment that contradict or affect their own norms and beliefs. They must learn how to reconcile such conflicts so their multiple identities -carer, parent, friend and worker – can operate in harmony (see Ibarra and Petriglieri 2010). Broadhead (2017), in his consideration of the difficulties experienced by medical students striving to balance private and professional lives, emphasises that professional socialization is not a unidimensional process. Instead, he argues it 'can be a means, at least in part, for individuals to fashion and express an assortment of multiple identities', and observes that 'students strive to become professionals as well as adults, men, women, spouses, parents' (4).

Our expectation that students transition smoothly from university to the workplace and will seamlessly develop PI is perhaps unrealistic and somewhat overlooked in employability literature. At what point, and how, will they successfully evolve from an observant in their infancy career stages to a practising professional? Previous studies (Jackson, 2017; Nadelson et al. 2017) found most HE students remain at the following stage, calling for greater attention to fostering identity development. Related to this is better understanding those capabilities that will enable a student to progress through the stages of PI development. Technical expertise, judgement, commitment and accountability (Trede 2012), and commitment to lifelong learning are required to make meaning and develop new knowledge to facilitate continuous improvement (Paterson et al. 2002). For graduates to be employable and

survive in the contemporary working environment, it is increasingly important they are mobile across different industries, sectors and contractual arrangements (FYA 2015; Jain and Jain 2013). This requires a confident professional self who has a strong connection with core professional ideology and can interpret existing knowledge, make meaning and create new knowledge efficiently in varying contexts. Initiative (Ibarra 1999), confidence (Nicholson et al. 2013), self-awareness (Klenowski et al. 2006), and self-esteem and a sense of purpose (Henkel 2005) are important for being willing and able to give voice to their thinking and question the existing practice they are exposed to. Patterson (2002) argues strong capabilities in communication, teamwork and organisation are also important for the journey to constructing the 'sense of being a professional' (6). Speaking up and questioning the status quo may attract feedback, which must be used constructively, and resistance to change which will demand resilience (Ashby et al. 2013). Capabilities that are more rudimentary to developing PI include the ability to manage time and tasks efficiently and apply skills effectively in a professional context.

Developing professional identity in HE

Higher education, in collaboration with industry, must provide opportunities for students to familiarise with professional ideology and expose students to challenging situations where they learn to evaluate existing knowledge and practice, make meaning through reflection and feedback processes, and develop an understanding of their own beliefs and knowledge. Jackson (2016) draws on the work of Wenger (2010) and applies a 'communities of practice' model whereby students experiment and interact with a range of different communities in the HE landscape, such as societies, clubs, academics, employers and professional associations. Higher education, with the support of local industry and community partners, must provide equitable access for all student groups to engage with these various communities so they can develop their identity through the experience of membership and participation. The process of engaging with several communities will help students understand and work through the process of reconciling multiple identities.

Project-based learning can be another effective approach for developing PI (see, for example, Tan et al. 2016; Wiele et al. 2017). Wiele and colleagues found Marketing student engagement with 'real' clients through project-based consultancy challenged students' self-perception and encouraged them to think beyond grade achievement. They assert, 'the culture of the firm, the immersion in the business context and high autonomous interaction with the project stakeholders effectively allow the learners to find themselves as professionals' (60). Continuing the theme of authenticity, Lucas and colleagues (2014) advocated the importance of real world problem-solving

through – for example - competitions, projects, and entrepreneurial pitches to industry panels in helping to develop Engineering students to ‘think and act like’ Engineers. Vaughan (2017) asserted the importance of workplace learning in shaping identity and disposition. She argues that opportunities for capability and identity development are central to the workplace and learner – in this study, apprentices – exposure to significant learning experiences (termed ‘vocational thresholds’) helped to define their vocational identity.

WIL provides another example of a pedagogical initiative for fostering PI (Oliver 2015; Trede 2012). It offers a safe opportunity for students to ‘practice’ being a professional, given its position at the crossroads of academic and workplace learning, and a platform for developing the numerous capabilities associated with PI. Here, students can observe and then experiment with imitating professionals through task and project completion. This occurs in a context of constructive feedback which endorses behaviour or identifies areas for improvement in line with the expectations and standards of the profession. As Ibarra (1999) notes, student behaviour during WIL provides them with a benchmark which they can reflect on and help them to decide whether this is what they aspire to be. WIL affords students the opportunity to have a ‘practice run’ at coping with the challenges faced by new graduates as they enter the workplace. There is the expectation that they will behave like a professional without having familiarised or internalised the PI associated with their role. Here, newcomers must ‘convey a credible image long before they have fully internalised the underlying professional identity’ (Ibarra 1999, 764). WIL offers the dual benefit of helping students to realise the importance of PI, through reflective activities and assessment both during and post-experience, and allowing them to experiment with a particular identity to inform their career pathway post-graduation.

There are several studies (see, for example, Drewery et al. 2016; Smith et al. 2014) that demonstrate the value of WIL in developing capabilities associated with PI, including communication, team-working, self-awareness, resilience, technical expertise, confidence, lifelong learning, work ethic and the ability to apply skills in a work context. While the importance of WIL for PI development is acknowledged (Billett 2009; Schaap et al. 2009), there appears to be little empirical analysis of if and how a student’s PI changes during the experience. Recent evidence suggests that WIL is valuable for developing early stages of PI – that being student familiarity with professional ideology and learning to complete tasks through observing and imitating professionals – and less so for the advanced stages of PI (Jackson 2017).

Variations in professional identity by individual characteristics

Variations in PI formation may exist among students by gender and age (see Clark, Zukas, and Lent 2011; Nystrom 2009). Social class may also influence identity formation with students from lower socio-economic groups having less exposure to professional networks and a weaker understanding of professional ideology that is more associated with middle class cultural capital (Brown et al. 2003; Greenbank et al. 2009). Identity development may be more difficult for international students due to less exposure to professional networks (see Li 2017) and an inability to connect with professionals due to differences in culture and language (see Coles and Swami 2012). In her study of early career academics, for example, Archer (2008) found that individuals consider themselves less 'authentic' and 'successful' if they were younger, of a lower social background, from an ethnic minority group or female as they did not 'fit' with the practices and values of established professionals.

The study's research questions were, first, what are the differences in student and supervisor perspectives of the PI capabilities of students completing a WIL experience? Second, are there differences in PI development by students' individual characteristics? Third, do PI capabilities change during the WIL experience and, if so, how? Finally, what challenges do students experience in developing PI during WIL?

Method

Participants

Table 1 summarises the characteristics of 212 business undergraduates in a Western Australian university who participated in a study conducted over four academic semesters. The sample comprised of 54 students in the first semester, 49 in the second, 51 in the third and 58 in the fourth. Each student participated in the study for one semester only. Their participation was determined by their electing to complete a WIL unit in the latter stages of their degree program. There were 161 different workplace supervisors assigned to these 212 students. The WIL unit comprises 100-150 hours of workplace experience in an area relevant to the student's specialisation. Entry onto the WIL unit requires a credit course average (waived in certain circumstances), reference from a discipline academic and successfully proceeding through a series of resume workshops and interviews. As shown in Table 1, there were higher proportions of domestic and female students and most were aged below 25 years.

[Table 1 near here]

Setting

Students undertook their work placement in a range of settings, including public sector agencies, private companies and not-for-profit organisations of different sizes and structures. Students attended the workplace for one to two days per week over the 13-week academic semester. Students negotiated personalised learning outcomes with their academic coordinator and workplace supervisor early into their work placement. They self-assessed their progress against these targeted outcomes during the placement and gathered evidence of their achievements. Some students undertook project work while others' placements were more task-focused. Workplace supervisors were responsible for monitoring and guiding students throughout the experience, drawing on the academic coordinator if issues or concerns arose. Careful consideration was given to quality characteristics and principles (see, for example, Billett 2011) in the design of the WIL program. This included preparing students for WIL and integrating their learning across the professional and classroom settings through reflective activities. While it was not possible to have quality assurance for every workplace setting, provisions were put in place to ensure students were adequately supported by their academic coordinator and workplace supervisor with a strong emphasis on regular feedback and mentoring. Program and assessment design encouraged clear communication of expectations and achievements among all stakeholders involved in the work placement.

Measures

Supervisor evaluation report

At the conclusion of the placement, workplace supervisors were required to complete an evaluation report on their assigned student. This involved rating their student on 17 different capabilities relating to PI using a five-point scale ranging from one (very poor) to five (excellent). These capabilities were determined from a broad review of conceptualisations of PI within the context of employability, as outlined in the 'professional identity and employability' sub-section in the Background. There are no threshold ratings that define when a student has developed PI, capability ratings can be considered more as a spectrum of development and collectively indicate student progression towards the advanced stages of PI. Exposure to developing the different capabilities was considered within the scope of the work placement experience. A 'not applicable' option was available for when the WIL experience did not offer the opportunity to demonstrate a particular capability. Supervisors were also asked to note any improvement in the 17 capabilities using a yes/no tick-box against each. In open-response format, supervisors were then invited to 'provide a brief statement s to the student's performance – highlighting

strengths and areas for improvement'. The supervisors' evaluation of student capabilities formed one component of the student's final assessment and therefore contributed to their overall awarded mark in the WIL unit.

Student capability assessment

Upon completing the placement and as part of their formal assessment, students rated themselves on the same 17 PI capabilities. They were then asked to identify any capabilities that they felt they had improved in during WIL and to provide a supporting example. The student's capability assessment formed one component of their final assessment and therefore contributed to their overall awarded mark in the WIL unit.

Student written reflection

Also as part of their final assessment and therefore contributing to their overall unit mark, students were required to write a reflective commentary upon receipt of their supervisor's evaluation report. The reflective commentary required students to, in no more than 500 words, 'provide a response to the points raised in the supervisor evaluation, including the various ratings assigned to their capabilities and any comments on their particular strengths and weaknesses'. They were encouraged to compare the ratings they assigned and those assigned by their supervisor.

The student's final assessment comprised the supervisor evaluation report, their capability assessment and their written reflection, among other elements not relevant to this study. The academic coordinator for the WIL unit marked the final assessment.

Procedures

Workplace supervisors were briefed – via email with the option to discuss by phone – on how to complete the summative evaluation report at both the beginning of the work placement and just prior to its completion. They were invited by email to share their evaluations for research purposes at the early stages of the work placement, of which six declined. The 221 placement students were invited by email to share their two assessments (capability self-assessment and written reflection) for research purposes at the mid-point of the work placement and prior to both assessments being completed, of which three declined. Students, or their associated supervisor, who declined to share their data for research purposes were removed from the analysis, resulting with a final sample of 212 undergraduates.

Analysis

Student and supervisor perceptions of PI capabilities

Mean ratings were computed for the 17 PI capabilities for both supervisors and students. Differences in student and supervisor perceptions of PI were analysed in two ways. First, the students' and supervisors' 17 PI capability ratings were compared using paired t-tests. Second, the thematic analysis of students' reflective commentary identified differences between their own and their supervisor's perceptions of their capabilities, strengths and areas for improvement. On occasion, the supervisors' raw open-response comments on student weaknesses, strengths and areas for improvement were drawn upon to clarify a student observation in their written reflection.

Variations in PI capabilities by individual characteristics

Variations in both supervisor and student ratings were analysed using a series of MANOVAs for individual characteristics, including gender, age, residency status and discipline. The influence of socio-economic status was not explored in the study. Utilising postcode as a measure was considered problematic given the high number of international students and parents' educational background, an alternative measure, was not readily available for several students.

Perceived changes in PI and challenges during WIL

Perceived changes in PI during the WIL experience were gauged in two ways. First, by analysing the proportion of students and supervisors noting an improvement in any of the PI capabilities. Second, a thematic analysis was conducted of students' provided examples of how they had improved in certain PI capabilities, along with their any relevant points from their written reflective commentary. Perceived challenges in PI development during WIL were identified in a thematic analysis of the students' written reflection.

Thematic analysis adopted the basic principles of qualitative research (see Mishler 1990). Inductive coding was completed at the individual response level to allow themes to emerge from the raw, qualitative data. This created a framework of themes for that particular area of analysis. The themes were then interpreted within the context of relevant literature, more specifically that relating to employability, PI and WIL.

Results

Student and supervisor perceptions of PI capabilities

Professional identity capability ratings

Table 2 summarises the mean ratings assigned by students and supervisors for each of the 17 different capabilities associated with PI. The assignment of highest to lowest ratings broadly align with the same three capabilities attracting the highest ratings for both students and supervisors. These were ‘upholding professional conduct’ followed by ‘interest in and commitment to professional development’; and ‘pursues tasks and responsibilities with commitment and interest’. The six capabilities attracting the lowest ratings were the same for both groups although in a slightly different order. These were self-awareness, confidence, initiative, technical expertise, professional judgement, and generating new ideas. Paired sample t-tests were conducted to compare the mean ratings assigned by students and supervisors for each of the 17 capabilities (see Table 2). The mean supervisor ratings were significantly higher for all but three of the 17 capabilities. These were accepts responsibility and accountability for own tasks and actions; upholds professional conduct; and interest in and commitment to professional development and future learning.

[Table 2 near here]

Student written reflection

Students’ reflective commentaries largely indicated acceptance that supervisors were more aware of the standards expected in the workplace and were therefore better positioned to assign accurate ratings. There was significant evidence of differences in ratings being constructively interpreted and translated to consideration of why they were lacking in certain areas and identifying ways to improve. Some, however, were critical of rating differences and believed supervisor underestimations reflected a lack of familiarity with their capabilities and their achievements during their placement experience. This was attributed to the short time their supervisor had known them or their lack of interaction on a daily basis with some feeling other workplace peers were better positioned to provide an accurate assessment of their capabilities. Some felt they were not given adequate opportunity to demonstrate particular capabilities for which they received weak ratings. For those students who assigned lower ratings than their supervisors, many commented on the peculiarity of their personality being perceived in a different way to how they saw themselves.

Variations in PI capabilities by individual characteristics

Student ratings

A series of MANOVAs explored variations in student ratings by individual characteristics. Interestingly, there were little differences among student groups with no significant results reported for gender, age or business specialisation. A MANOVA interaction ($\alpha=.05$) which approached significance was, however, reported for international student status, $\lambda =.858$, $F(17, 171)=1.671$, $p=.052$, partial $\eta^2=.142$. Univariate analysis, with a Bonferroni correction ($\alpha=.003$), indicated a significant effect for communicating effectively, $F(1, 203)=13.962$, $p=.000$, partial $\eta^2=.064$; and working effectively with others, $F(1, 203)=11.904$, $p=.001$, partial $\eta^2=.055$. A comparison of means shows that domestic students recorded a higher mean rating for communication (4.32) than their international counterparts (3.89). Similarly, the mean rating for team working for domestic students (4.49) was higher than international students (4.15).

Supervisor ratings

A series of MANOVAs was conducted for supervisor ratings of student capabilities. In alignment with student ratings, no significant results were reported for gender, age or business specialisation. A significant MANOVA ($\alpha=.05$) was recorded for international student status, $\lambda =.784$, $F(17, 175)=2.839$, $p=.000$, partial $\eta^2=.216$. Univariate analysis, with a Bonferroni correction ($\alpha=.003$), indicated a significant effect for international student status on communicating effectively, $F(1, 208)=16.859$, $p=.000$, partial $\eta^2=.075$; working effectively with others, $F(1, 207)=11.248$, $p=.001$, partial $\eta^2=.052$; generating new ideas, $F(1, 205)=25.267$, $p=.000$, partial $\eta^2=.110$; technical expertise, $F(1, 202)=11.939$, $p=.001$, partial $\eta^2=.056$; and professional judgement, $F(1, 203)=10.340$, $p=.002$, partial $\eta^2=.048$. The mean ratings for domestic students were higher than for international students across all five capabilities.

Changes in PI during WIL

Improved ratings

When asked, both students and their supervisors believed there was improvement in each capability during the WIL experience. Table 3 reports a marked difference between the number and proportion of students and supervisors noting an improvement in the different capabilities. While communication, technical expertise and confidence were recorded by the greatest proportion of both students and supervisors as having improved, the proportion of students was approximately double that of supervisors. There was less agreement between the two cohorts on the capabilities that the least felt had improved. For students, these were demonstrating resilience; a

sense of purpose and self-esteem; accepting responsibility and accountability for own tasks and actions; self-awareness and professional judgement. Areas noted by the least number of supervisors as improved were upholding professional conduct; showing resilience; pursuing tasks and responsibilities with commitment and interest; accepting responsibility and accountability for own tasks and actions; and managing time effectively.

[Table 3 near here]

Student written reflection and improvement examples

Common themes were identified regarding the role of WIL in both the students' reflective commentaries and their examples of how capabilities improved. First, students acknowledged the importance of observing professionals and their decision-making and management of arising issues. They felt this greatly assisted the development of their own judgement and reasoning. One student commented, 'communicating in the workplace cannot be taught in a classroom. My placement showed me by observation and participating how to communicate in such an environment effectively and professionally which will be taken through to my career'. Some noted the value of discussing career aspirations within the workplace, leading to advice on how to pursue particular pathways and any gaps in capabilities they must fill. An international student reflected, "it has been ingrained in me that it is essential to have a certain distance and respect to people older or who are my superior. Having said that, I believe myself to be halfway on the path of infusing Australian workplace culture in me after going through this program'.

Second, many noted how exposure to authentic tasks energised their learning, enabling them to better manage both menial and challenging tasks. Interwoven into student responses was their greater commitment to tasks in the workplace than those at university, simply because they were 'real'. While several students commented on the tedious nature of filing and photocopying, they appeared to appreciate these tasks provided an opportunity for learning. Several appeared to understand the importance of being self-directed and undertaking additional research on their assigned tasks to maximise performance. Others noted the value of working autonomously which gave them a sense of purpose, motivated them and increased their self-awareness through exploring their capabilities and knowledge.

Third, being given opportunities to practice followed by open conversations with peers and supervisors on their performance and progress - and how it could be improved - seemed critical to student development. Their learning

included understanding how and when to ask for assistance, being mindful of others' workload and timelines, training themselves to interpret feedback constructively and using it to identify pathways for future development. Several noted that framing feedback positively came with confidence and required them to overcome the inclination to feeling they had failed. Some also acknowledged the need to learn how to manage their mistakes and how this helped develop resolve and perseverance.

The fourth dominating theme was growth in confidence through mentorship and supervision, augmenting student learning by empowering them to ask questions, clarify tasks, and share information about their work and themselves. A significant proportion attributed enhanced confidence to their supervisor and peers who helped them overcome doubts in their capabilities by emphasising they were still learning, and encouraged them to reflect on their weaknesses and how to improve on these. As one student commented, 'as the time went by and I found myself comfortable and confident, I started to construct some ideas and deliberated them to the supervisor or the staff I worked with'.

Challenges for PI development during WIL

The analysis of comments in the supervisor evaluations and students' reflective commentaries highlighted a number of challenges that inhibited student development of capabilities associated with PI. First, attending the workplace on only a weekly basis was perceived by some students and supervisors to hinder the continuity and flow of student work and did not maximise their learning. In particular, the short length and format of the work placement appeared to hinder the development of professional judgement and suggesting new ideas, important for the more advanced levels of PI. Some students expressed a lack of capability or confidence in voicing their opinions and suggestions. Some attributed this to their short length of exposure to the workplace, while others felt they could not overcome the initial hurdle of speaking up. A feeling of regret appeared to resonate in the reflective commentaries of students who felt they had not overcome their nerves and therefore fully grasped the opportunity to speak up and contribute more during their placement. Only a handful commented on their environment not being sufficiently 'encouraging' or that it did not provide adequate feedback to empower them and make them comfortable to experiment and extend themselves.

A small number of students seemed to feel disconnected from their peers due to working in isolation on a specific project, suggesting a placement where students experience both task-focused and project-based learning may work

better for PI development. Also apparent in the reflective commentaries was some students feeling pressured to contribute when they genuinely did not have ideas or suggestions due to their lack of experience. This seemed to cause frustration and disappointment, which negatively affected self-esteem and ultimately affected the learning experience.

Discussion

Student and supervisor perceptions of PI capabilities

There were similarities in the distribution of supervisors and student ratings and implications for perceived PI capabilities among HE students. The relatively high mean ratings for student capabilities in upholding professional conduct aligns with previous studies on WIL (see Jackson 2016) and is indicative of early stages of PI formation. Perceptions of a collaborative mindset are suggested by the relatively high mean ratings assigned to team-working. This is positive given the high demand for professionals to operate in virtual and fluid groups during their working life (CEDA 2015). Commitment to lifelong learning and work ethic were perceived as relatively strong, perhaps skewed given the sample self-selected to participate in WIL and generally require above average academic performance to enter the program. Relatively weaker capability ratings for technical expertise, professional judgement, and generating new ideas raises concerns as these capabilities are important for more advanced stages of PI. However, it is not unreasonable to expect room for improvement in these capabilities, particularly given the short length of WIL and the students are in the very early stages of their careers. Of greater concern are the relatively lower levels of self-awareness, confidence and initiative that are critical for transitioning from an ‘observer’ to a reflective practitioner who leads improvement in the workplace.

The supervisors’ significantly higher mean ratings for 14 of the 17 capabilities may support Stark and Greggerson’s (2016) assertion that ‘they view their supervisees’ investments as a reflection of their own success as a supervisor’ and as an extension of themselves. The higher ratings among supervisors might contravene expectations given millennial students have been characterised as having an inflated sense of their own capabilities (Papadopoulos 2010). It could indicate the Dunning-Kruger effect (Kruger and Dunning 1999) where students do not realise what they are not capable of until they are given the exposure needed to make an informed judgement. For example, Smith et al. (2014) found that undergraduates not previously exposed to WIL had overestimated their preparedness for employment. Certainly, there was an overwhelming sense of reassurance and optimism among students who discovered their supervisor had assigned higher ratings than themselves. Their bolstering of confidence reinforces the importance of supervisors giving positive feedback where it is due.

Variations in PI capabilities by individual characteristics

Findings suggest uniformity in PI capabilities across the different student groups other than for residency status. While weaknesses among international students in communication and team-working capabilities are widely discussed in the context of employability and employment outcomes (IEAA 2012; Kinash 2015), these relate more to their 'performance' in the workplace than any impact on PI formation. These relatively weak ratings align with previous studies documenting employer concerns with international student capabilities in these areas (Blackmore et al. 2014; Kinash 2015), augmented by language deficiencies and a lack of cultural understanding (see Gribble 2014). Students from certain regions may consider 'speaking up' as deference to authority, preventing them from suggesting new ideas (Elliott and Reynolds 2014). Lower levels of self-confidence among international students (Jackson 2015) may explain the relatively poor demonstration of professional judgement and reasoning. The lower mean rating for technical expertise, however, confounds this argument and perhaps suggests that lesser ability may be a contributing factor.

Changes in PI development during WIL

The far greater proportion of students noting an improvement in PI capabilities may genuinely reflect a higher perceived level of learning during the placement than supervisors. Alternatively, it could indicate a keenness among students to demonstrate enhanced learning as the self-rating assessment formed part of their final assessment for the WIL unit. The lack of noted improvement among students in self-awareness and sense of purpose suggests the need for more attention to integrating learning across settings, encouraging students to make explicit links between what they have learned in the classroom and the workplace (Billett 2011). The relatively low proportion of supervisors noting improvement in professional conduct and pursuing tasks with commitment may simply be due to an already high benchmark on entering the workplace, as indicated by the relatively high mean ratings. Showing resilience and accepting responsibility and accountability shared a low incidence of improvement among both students and supervisors, raising questions on how to better develop these during WIL. They are highly valued by employers (AAGE 2017) and, specific to PI, are critical for managing challenging circumstances and progressing to self-authorship.

Managing time effectively, and the broader spectrum of organisational capabilities, may be a challenge for WIL students on shorter work placements, particularly if not previously exposed to the demands of multi-tasking and

a fast-paced working environment. Achieving a mediocre mean rating by both supervisors and students may suggest students are relatively weak in this area when commencing WIL and while every student noted they had improved, it does not appear to be enough to meet the expectations of workplace supervisors. This raises concern as having the confidence and ability to manage tasks and time is fundamental to any professional role. Several students noted in their proffered comment on how they improved in 'identifying and suggesting ideas' that familiarity with the tasks and environment, overcoming fear of rejection and developing the confidence to voice one's thoughts were important. While many students appeared to work through this process, the length of the WIL experience may have inhibited others. This may be particularly true for those with no or very limited prior work experience.

Findings emphasised the value of student interaction with a range of internal and external stakeholders and highlighted WIL as a rich learning environment for PI development, as well as a valuable opportunity for networking (Bourner and Millican 2011). Also highlighted was the importance of authenticity in PI development and its central role in a quality WIL experience (Smith and Worsfold 2015). Many students observed how ownership and responsibility of particular tasks or projects made them feel they were making a difference and heightened their sense of purpose. This acts as a motivator for individuals for further self-improvement and progression in their field. There was also evidence of PI development arising from the use of quality feedback, a foundational pillar of WIL design (Billett 2011). Increased confidence, fundamental to the more advanced stages of PI (Moss et al. 2014), enabled some students to progress to suggesting new ideas and ways of working during their WIL experience. Related to this, it was evident among students that a lack of confidence, through inexperience, was an important factor in not progressing to 'self-authorship' (Baxter Magolda 1998).

Implications for WIL design

Findings suggest WIL may be a valuable platform for effecting PI development in participating students. The study assists in identifying principles for WIL program design, structure and content that may empower students and provide them with adequate opportunity to develop the capabilities associated with PI. First, design which encourages students to observe and interact with professionals, and to practice 'being a professional' with feedback and discussion on how to improve, appears paramount. Second, the authenticity of assigned work appears critical for effectively engaging students in their WIL experience and aligns with good practice principles of WIL design (Smith 2012). Allowing students to work on 'live' projects and tasks, with a shared understanding of how the deliverables are used, appears to add value to their learning. Students recognised the importance of

learning how to manage their mistakes. Encouraging industry partners to expose students to challenging circumstances, albeit within a context of reflection, feedback, and guidance on managing such scenarios, may enhance perseverance and resolve which is critical for self-authorship.

Third, findings suggest that placement design purposively challenges students by making them accountable for tangible outcomes and having a shared understanding of the broader consequences of failing to deliver. Fourth, quality mentoring and feedback processes appear critical for fostering student confidence and facilitating a rich learning experience and progression to more advanced levels of PI. The completion of summative evaluations by supervisors who are familiar with the student and their completed work is important, in addition to providing clear guidelines on the completion of evaluation reports, should improve feedback accuracy. Jackson and colleagues (2016) highlight the need for academic coordinators to emphasise the value of regular feedback and performance review to both students and supervisors, in addition to guidance – such as videos and fact sheets - on giving and receiving constructive feedback.

Fifth, devising programs that specifically target the development of self-awareness, confidence and initiative appears important for encouraging students to transition from ‘observer’ to becoming a critical practitioner. Again, quality feedback and mentoring processes shone through as important here. Implementing buddy and/or peer mentoring schemes, with entry-level staff or new graduates, within the workplace may foster more ‘speaking up’ among students who may feel intimidated by seasoned professionals. This may also alleviate any feelings of disconnectedness in the workplace. Further, clarifying the importance of reflecting upon current practice and ‘speaking up’ with suggestions or querying the status quo is vitally important, particularly for international students. Video clips on coping with scenarios - such as reconciling differences between classroom theory and workplace practice, managing clashes between personal and professional values, and how to voice your ideas productively and without criticism - may prove useful.

Helping students to integrate their workplace and on-campus learning through critical reflection could build self-awareness and confidence. Critical reflective activities and assessment can be incorporated into WIL as students prepare for their experience, as well as during and post-WIL. For example, students could engage with peers through reflecting on their handling of a particular scenario relating to PI formation – such as reconciling theory with practice – then write an individual reflection on their learning and planning going forward which also

evidences their interaction with fellow students. Another could be a structured exercise where students reflect on certain capabilities and/or behaviours related to PI with a workplace colleague, such as confidence levels and proffering suggestions, and submit an individual reflection that evidences their peer engagement and outlines their strengths, weaknesses and developmental pathways for improvement.

Sixth, drawing on the challenges experienced by students, lengthier programs may be more effective in developing PI. Alternatively, implementing WIL in 'block' format could facilitate greater exposure to professional culture and create more opportunities for completing complex work. Scheduling WIL academic units as intensive programs during traditional inter-semester breaks, such as 'summer' or 'winter' sessions, may thus catalyse PI development. Finally, pressure exerted on students to 'perform' in areas that are unfamiliar to them, or deemed beyond their capability, affirms the need to ensure industry partner expectations are realistic and aligned to educators' (Smith et al. 2014). This requires a broad cultural understanding among stakeholders that WIL is a learning opportunity for student to develop the capabilities required in their profession, not necessarily demonstrate them. Case studies and sample placement proposals that outline typical student tasks, outcomes and deliverables may be useful for managing supervisor expectations on capability levels and likely performance (Jackson et al. 2016). It is important to note the potential tension of trying to balance the provision of meaningful and suitably challenging work to students – which facilitates the autonomy and responsibility they desire – while not overwhelming those that feel less confident or capable. This highlights the need for open and regular communication among academic coordinators and workplace supervisors on their assigned student capabilities.

Conclusion

Professional identity refers to an individual's understanding of and commitment to the values, norms and beliefs of their profession, enabling them to operate effectively and responsibly in their role. It is increasingly recognised as important for graduate employability, prompting this study on how PI capabilities changed in 212 business undergraduates during their workplace learning experience. It explored the student PI capabilities that improved, and those that did not, from the perspective of both students and their work placement supervisors. Students and supervisor ratings broadly aligned in the capabilities they perceived students demonstrated well, and those in which they were relatively weak. Considerably more students than supervisors felt they had improved in the PI capabilities yet the value of WIL for identity formation was apparent in both groups. Students felt, for example, that WIL enhanced their confidence, allowed them to explore their strengths and aspirations, and its authenticity

engaged them more in the learning experience. Findings suggest, however, that students can experience difficulty in progressing to the more advanced stages of PI development. While this does not appear to vary by gender, age or business discipline, international students reported relatively weaker PI capabilities.

While every WIL experience is unique, the study highlighted the rich opportunity for PI development for participating students. There are, however, certain challenges for PI development during WIL that have implications for program content and design. Incorporating certain principles into design may foster the more advanced stages of PI among HE students and thus improve this particular dimension of graduate employability. As with all studies, there were limitations. Data were gathered in only one institution and from only discipline. There were, however, a range of business specialisations involved and data were from two sources – WIL students and their supervisors – over four different time periods. The study's lack of reliance on student ratings is positive given concerns for using self-assessed data (Taylor 2014). There are, however, questions regarding the validity and reliability of supervisor evaluations given their tendency to assign students inflated marks due to leniency bias or their focus on growth and development rather than critical judgement (Vinton and Wilke 2011). While capability ratings can be limiting as a form of evaluation, they can provide a rich profile of student capabilities when combined with qualitative data from the perspective of both student and supervisor.

In relation to future research, there would be merit in exploring different disciplines and other models of WIL. As WIL becomes increasingly embedded in HE, examining the impact of more scalable forms of non-immersed WIL – such as project-based and consultancy learning – would be useful. Further, comparing the impact of lengthier WIL programs and those generic in nature, such as university-wide volunteering and service learning programs, versus discipline-specific ones would enhance our understanding further. There may also be benefit from conducting a more fine-grained analysis of student-supervisor pairs, particularly those with very different evaluations of PI capabilities. Exploration of the precise impact of each of the pillars of WIL design (feedback, preparation and reflection) on PI development would further inform good practice principles. In addition to gaining insight into the role of socio-economic status, exploration of any differences in PI formation between domestic and international students may inform us of the extent to which individuals envisage PI in terms of practice and culture in their home country. Like others, this study focused on the supply-side of graduate employability, meaning HE sector's efforts to develop high-performing graduates, including those with developed PI. It is important that future studies also consider the demand-side policies and practices to improve graduate

outcomes. More specifically, how the government, professional bodies and industry are collectively enhancing the demand for quality graduates through the provision of career and entrepreneurial opportunities.

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Table 1 Characteristics of student sample (N=212)

Characteristic	Sub-group	N	%
Gender	Male	61	28.8
	Female	151	71.2
Age	0 - 24 years	132	62.2
	25 - 29 years	37	17.5
	30 - 39 years	28	13.2
	40 years plus	15	7.1
Residency status	Domestic	162	76.4
	International	50	23.6
Specialisation	Tourism, Hospitality, Recreation and Events Management	43	20.3
	Marketing, PR, advertising	33	15.6
	HRM	41	19.3
	Finance and accounting	63	29.7
	Management	5	2.4
	Other	27	12.7
Sector	Public	46	21.7
	Private	134	63.2
	Not-for-profit	32	15.1

Table 2 Capability ratings by students and supervisors

	Student			Supervisor			Mean difference		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Communicates effectively in a work environment	205	4.22	.713	210	4.39	.655	-2.855	203	.005
Works effectively with others	205	4.41	.601	209	4.57	.593	-3.384	202	.001
Pursues tasks and responsibilities with commitment and interest	208	4.45	.635	209	4.60	.597	-2.747	205	.007
Accepts and uses feedback in a constructive manner	206	4.36	.608	207	4.58	.584	-4.336	201	.000
Generates and suggests new ideas	203	3.78	.834	207	4.07	.776	-4.574	199	.000
Accepts responsibility and accountability for own tasks and actions	209	4.44	.579	210	4.50	.613	-1.054	207	.293
Shows initiative	206	4.14	.768	208	4.32	.739	-3.018	202	.003
Manages time effectively to achieve defined goals	205	4.21	.760	210	4.42	.646	-3.422	203	.001
Demonstrates self-awareness	207	4.12	.646	208	4.36	.681	-4.094	204	.000
Shows resilience	204	4.16	.677	205	4.43	.627	-4.318	198	.000
Upholds professional conduct, including following protocols, processes and dress codes	206	4.70	.510	209	4.70	.535	.102	203	.919
Exhibits technical expertise and knowledge at the expected level	203	4.03	.674	204	4.26	.672	-3.581	195	.000
Exhibits professional judgement and reasoning ability	207	4.07	.596	205	4.36	.647	-5.049	200	.000
Displays confidence in manner and approach	204	4.02	.778	208	4.36	.673	-5.290	200	.000
Demonstrates a sense of purpose and self-esteem	207	4.21	.676	208	4.51	.598	-5.547	203	.000
Able to apply their skills and knowledge in the work context	205	4.29	.618	209	4.49	.605	-3.940	202	.000
Shows interest in and commitment to professional development and future learning	207	4.56	.627	204	4.66	.570	-1.781	199	.076

Table 3 Improvement in capabilities from the WIL experience

Capability	Student - Improvement		Supervisor - Improvement	
	<i>N</i>	<i>Valid %</i>	<i>N</i>	<i>Valid %</i>
Communicates effectively in a work environment	113	54.1	55	26.1
Works effectively with others	70	33.7	44	20.9
Pursues tasks and responsibilities with commitment and interest	53	25.9	27	12.9
Accepts and uses feedback in a constructive manner	75	35.9	33	15.6
Generates and suggests new ideas	81	38.8	46	21.8
Accepts responsibility and accountability for own tasks and actions	42	20.1	30	14.2
Shows initiative	78	37.3	42	19.9
Manages time effectively to achieve defined goals	100	47.8	31	14.7
Demonstrates self-awareness	44	21.1	19	19.0
Shows resilience	34	16.3	22	10.4
Upholds professional conduct, including following protocols, processes and dress codes	51	24.4	14	6.7
Exhibits technical expertise and knowledge at the expected level	109	52.2	50	23.7
Exhibits professional judgement and reasoning ability	47	22.5	37	17.6
Displays confidence in manner and approach	106	51.0	59	28.0
Demonstrates a sense of purpose and self-esteem	37	17.7	34	16.2
Able to apply their skills and knowledge in the work context	98	46.9	40	19.0
Shows interest in and commitment to professional development and future learning	85	41.1	33	15.7