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Published in:

Professional Learning in the Work Place for International Students: Exploring Theory and Practice

DOI:

[10.1007/978-3-319-60058-1_12](https://doi.org/10.1007/978-3-319-60058-1_12)

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Recommended citation(APA):

Bennett, D., & Ferns, S. (2017). Functional and Cognitive Aspects of Employability: Implications for International Students. In G. Barton, & K. Hartwig (Eds.), *Professional Learning in the Work Place for International Students: Exploring Theory and Practice* (pp. 203-222). (Professional and Practice-based Learning; Vol. 19). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-319-60058-1_12

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Functional and cognitive aspects of employability: Implications for international students

Abstract

This chapter reports from a study that examined the work integrated learning experiences of international students studying occupational therapy. We begin by setting the context with a short discussion of higher education, employability and work-integrated learning. We then report on three student cases, discussing the students' development before, during and after their internships. This leads to discussion of a possible model and recommendations for further research.

The complexity of WIL reflects graduate outcomes that are inherently unpredictable, unique and socially dependent. In the contemporary higher education environment, graduate employability—and WIL, as a strategy to achieve this—emerges as a critical focus for all stakeholders including government and industry partners globally. According to the OECD (oecd.org, 2015), the number of students enrolled in tertiary education outside their country of citizenship increased more than threefold over the two decades to 2011, at which time international students numbered almost 4.3 million. These students are known to experience challenges such as the loss of personal support structures and homesickness. They can also experience differences in culture, language, social environment, educational system and learning contexts.

Whilst higher education students in general report problems in this regard, the differences between the expectations and realities of uni-

versity life are particularly problematic for many international students. The identity uncertainty that results from different educational schemas is similarly confronting for those international students who do have the cultural capital that provides some sense of university life and the expectations of study. These issues highlight considerable challenges for all stakeholders and are exacerbated by the difficulties of securing WIL opportunities for international students.

Against this background, the chapter employs Krathwohl's 2002 revision of Bloom's taxonomy to explore the functional knowledge and cognitive process development of three international occupational therapy students. Interviews before, during and following the students' placements illustrate both their cognitive and functional development towards metacognitive knowledge and understanding. In line with the experiences of domestic students, the importance of reflection and supervisor relationship emerges as a key theme. The cases suggest that international students would benefit from pre-placement time in the workplace to orient themselves to a new workplace culture before their learning experience begins.

Rethinking higher education

Significant global shifts are challenging the traditional content-driven, delivery focused models characteristic of universities (Ernst & Young, 2012), with analogies such as avalanches and tsunamis used to describe the rate and impact of this change (Barber, Donnelly, & Rizvi, 2013). Environmental, economic and social conditions will undergo further and substantial change over the next two decades, impacting significantly on the nature of the employment market (Hajkowicz, Cook, & Littleboy, 2012).

It is imperative that the higher education sector reconceptualises how it does business, defines operations, and approaches both teach-

ing and learning and research. Influences such as the widening participation agenda, cultural diversity, technological innovations, rapidly changing workforce requirements, and demand for work-ready graduates with attributes conducive to socially responsive and skilled citizens are challenging customary approaches. Enhanced regulatory and standards-based scrutiny adds an additional dimension of complexity.

It follows that engagement with external stakeholders is emerging as a key determinant of the progressive and inclusive higher education institution. Collaboration with community agencies, industry corporations and government bodies in all aspects of the business including education and research is integral to maintaining a competitive edge in a highly volatile and unpredictable market. Mutually beneficial partnerships enable universities to broaden perspectives and transcend from the philosophical and knowledge driven focus to one of real world applicability (van Rooijen, 2011).

Many governments perceive education as a means to provide a suitably skilled workforce and as pivotal to a sustainable and productive economy. Moreover, global mobility requires graduates to have transferrable skills across diverse and multi-disciplinary contexts. It is, thus, insufficient to acquire expertise in a single field of study; the future workforce demands quick-thinking, adaptable and innovative employees who possess the skills to navigate an increasingly competitive and constantly evolving workforce (Hagel et al., 2014).

The rapid rate of labour market change presents challenges and opportunities for educational institutions. The focus of this volume is international education, which is a growing trend across higher education globally; Australia is recorded as the fifth most popular destination for international students (Department of Education and Training, 2015). The benefits of cultural, economic and political diversity afforded by international education are recognised (Black-

more et al., 2014), but with heightened competition in the global employment market, international students seek work-based practical learning experiences that complement the theory-based component of their studies (Gribble, 2014).

Rethinking employability

Views on graduate employability have shifted over time from an emphasis on individual job-getting to one that distinguishes between gaining employment and having the requisite skills to obtain or create work over time. In line with this, Dacré-Pool & Sewell (2007, p. 280) define employability as “skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful”.

Dacré-Poole and Sewell’s focus on personal satisfaction and goal achievement acknowledges the need for workers to remain work-ready throughout the career lifespan and in line with individual needs and interests. The corresponding need for life-long learning reflects growing acceptance that employability development is predicated not on ways of knowing – the epistemological or functional aspects of employability – but on “ways of being” (Barnett, 2007): students’ development along cognitive dimensions with respect to their disposition and capacity to engage as professionals.

As Bennett (2012) argues, self-belief and meaning making generates a corresponding increase in curiosity about self, career and learning; learner engagement; capacity for creativity and problem solving; active agency in the learning domain; and motivation to learn. Mindful of the functional and cognitive dimensions, this study adopted Bennett’s (in press) definition of employability development, being “The ability to find, create and sustain work and learning across lengthening working lives and multiple work settings”.

Of particular concern to the current study was Yorke and Knight's (2004) contention that students need to be in a workplace setting in order to learn work-related skills and knowledge. This was later re-emphasised by Mason, Williams & Cranmer (2009), who concluded that professional behaviours and skills are enhanced through industry placements and the involvement of industry in program delivery. More recently still, an Australian national study of employability concluded, "degree programs are rarely sufficient in and of themselves to deliver a good employability outcome" (Bennett, Richardson, & MacKinnon, 2015, p. 12). As such, work integrated learning emerges as a crucial consideration.

Work-integrated learning and international students

While WIL takes many forms, in essence it "encompasses a range of activities that integrate learning and practice" (Ferns, Campbell & Zegwaard, 2014, p. 1). Universities are reshaping curriculum to incorporate these activities, and international students are increasingly seeking degree programs that encompass WIL and that explicitly develop employability capabilities.

In this regard, Australia's national WIL strategy is leading the way internationally (Edwards et al., 2015) and there is strong alignment between WIL and meeting the needs of these international students. It follows that a consistent theme of recent Australian research is the positive impact of WIL pedagogy as a strategy for enhancing the employability of graduates (Ferns, Campbell & Zegwaard, 2014; Smith, Ferns & Russell, 2014; Phillips, KPA, 2014; Australian Industry Group, 2015; Edwards et al, 2015). Commentators also agree that industry and community engagement is fundamental to embedding WIL and to ensure the currency and authenticity of student learning.

To ensure a developmental approach to skill acquisition, WIL needs to be “scaffolded across the curriculum both vertically and horizontally” (Smith, Ferns & Russell, 2014, p. 6). However, recent research has highlighted a number of distinct challenges facing international students when sourcing and succeeding in WIL placements (Blackmore et al, 2014). This chapter underlines some of these challenges and examines how students sought to overcome them.

Theoretical framework and approach

Theoretical framework

Consistent with Australian higher education, international students were defined for this study as temporary residents (visa status) of Australia, permanent residents (visa status) of New Zealand, or residents or citizens of any other country. The research acknowledges the important relationship between university and work-integrated learning. In particular, our thinking about student development during WIL was informed by Knight’s (1999) competency approach to internationalisation.

With placements and competency in mind, we employed Krathwohl’s 2002 revision of Bloom’s taxonomy of educational objectives. Krathwohl separated the noun and verb aspects of an educational objective to form two dimensions in which the noun relates to knowledge and the verb relates to the cognitive process. Summarised at Figure 1, the addition of a fourth category within the knowledge dimension recognises metacognitive knowledge in which strategic, structural and self-cognition come together. In Krathwohl’s revision, the cognitive process dimension re-orders existing categories to being them into line with current educational objectives and the language is updated.

The cognitive process dimension							
The functional dimension	The knowledge dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
	Factual knowledge						
	Conceptual knowledge						
	Procedural knowledge						
	Metacognitive knowledge						
<p><i>Factual Knowledge</i> The basic elements that students must know to be acquainted with a discipline or to solve problems in it.</p> <p><i>Conceptual Knowledge</i> The interrelationships among the basic elements within a larger structure (for example, industry or workplace) that enable them to function together.</p> <p><i>Procedural Knowledge</i>: How to do something; methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.</p> <p><i>Metacognitive Knowledge</i> Knowledge of cognition in general as well as awareness and knowledge of one's own cognition.</p> <p><i>Remember</i> Retrieving relevant knowledge from long-term memory.</p> <p><i>Understand</i> Determining the meaning of instructional messages, including oral, written, and graphic communication.</p> <p><i>Apply</i> Carrying out or using a procedure in a given situation.</p> <p><i>Analyse</i> Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose.</p> <p><i>Evaluate</i> Making (<i>learning or workplace</i>) judgments based on criteria and standards.</p> <p><i>Create</i> Putting elements together to form a novel, coherent whole or make an original product.</p>							

Figure 1: Krathwohl's revision of Bloom's taxonomy (2002, from p. 214; bracketed text added by authors)

Context

The Occupational Therapy Board of Australia (OTBA) regulates Australia's Occupational Therapy (OT) sector, including the registration of graduates. The OTBA requires students to complete a min-

imum of 1,000 hours “including at least one fieldwork placement of 1 weeks’ duration” (Occupational Therapy Council, 2012, p. 10). The graduate OT students who participated in this study undertook regular short placements during each year of study. These placements exposed them to multiple OT contexts and patients, with an eight-week placement undertaken in the final year of study.

Process

Once ethical approvals were granted, the OT work placement coordinator was asked to help recruit international students. Invitations were sent to all international students via email and then followed up with a phone call. Nine OT students participated in individual interviews. These were held in person prior to, mid-way through, and following completion of the work placement or placements experienced over one 12-week semester. Interviews were conducted by a third person otherwise unknown to the students.

Demographic information was amassed during each interview. The first interview addressed previous work experience and identity, and asked students to express their expectations of their work placement. Informed by Knight’s (1999) approaches to internationalisation, the broad topic questions for the initial student interviews were as follows:

Previous work experience & identity

- Previous work experience in full- or part-time jobs (socialisation, critical incidents, problem solving, learning);
- Work-place socialisation skills;
- Reflective practice; and
- Self-identity.

Work placement Expectations

- Work-placement history;
- Understanding of what is involved;
- Preparatory activities and their effectiveness;

- Hopes and fears;
- Possible challenges; and
- Reflecting forward on positive outcomes.

The subsequent interviews addressed the same broad topics at mid-placement and post-placement. The interviewer also asked about changes in identity, self-perception, and thoughts about the future.

Interviews were recorded and transcribed verbatim. Initial analysis employed inductive coding to identify potential themes. For this, five of the nine interview transcripts were dual coded and compared to ensure consistency. The researchers coded the remaining four cases independently, consulting together as necessary. At this stage, italicised text was added to Krathwohl's matrix as shown at Figure 1. This ensured that the workplace dimensions of the study were recorded.

The second phase of analysis involved deductive content analysis using Krathwohl's framework elements, again with consultation as required. Finally, key statements were clustered into themes and meaningful units. Each new occurrence of the framework elements was recorded on a framework template as a shaded cell. Once analysis was complete, cells from each of the three interviews were overlaid to create a visual representation of the student's shifting cognition and understanding.

Findings

In this section we present and discuss three complete cases chosen at random from the sample of nine. The progression of students' thinking at the three interview points is highlighted: time 1 at pre-placement; time 2 at mid-placement; and time 3 at post-placement. Each case begins with a unique figure in which each occurrence of the framework elements is shown at times 1, 2 and 3. Pseudonyms are used to protect the students' anonymity.

Case 1: Linley Chan

Linley Chan is a 26-year old student who qualified and worked for 18 months as a doctor in China before deciding to retrain. Her cognitive and functional development across the three interviews is shown at Figure 2.

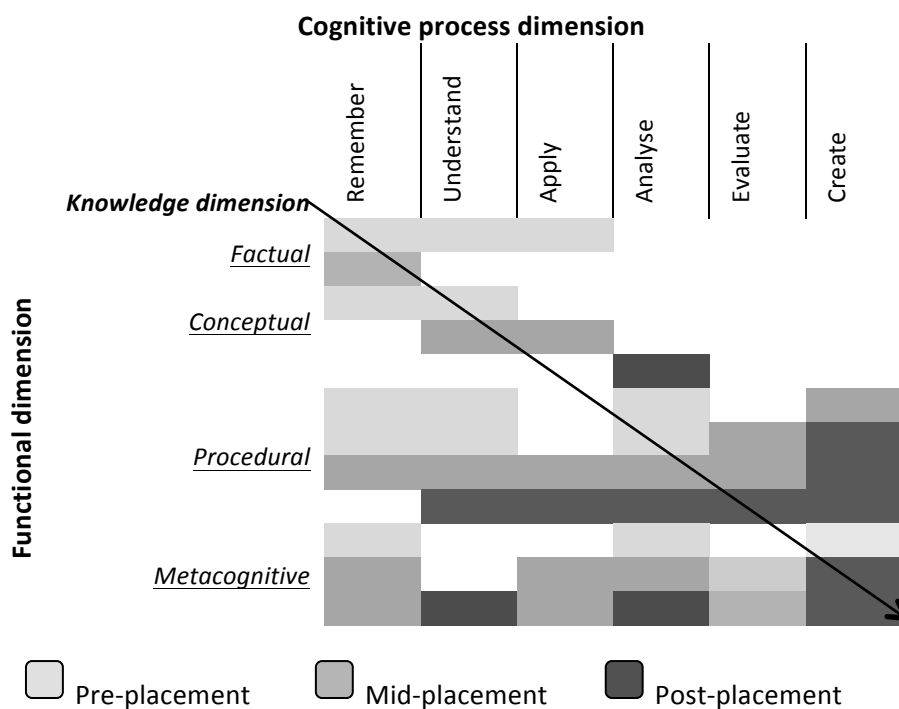


Figure 2: Linley: functional and cognitive occurrences

Time 1

At Time 1, Linley drew on her experience as a doctor and her part-time work in Australia to *remember* and *understand* factual and procedural knowledge as it related to her Australian work placements. Linley had already attended a one-day placement in Australia, and she made sense of differences in context, workplace culture and practice by relating these to her previous experience. Particularly

important to her understanding of the Australian context was her part-time work in the health sector, where she was working with people with dementia.

Even at Time 1, Linley was drawing on her experience to *evaluate* her short placements in terms of developing self-knowledge. She *remembered* the very competitive environment she had encountered when working as a doctor. This impacted her thinking about other work experiences, which she described as "...a totally different experience". Using reflection, she analysed her experiences of working in a competitive environment, which was not always pleasant, and this enabled her to position her experience as a learning curve: "I need to learn more and maybe listen to the doctors more carefully and try to do my work better – so it's a positive thing".

Linley also realised the need to ask questions in order to move from cognitive knowledge to procedural knowledge: from theory to practice.

The assistant job at [my part-time workplace] is practical and the course is theoretical so I need to link them ... and actually the real situation is not in accordance with what you read in the books, so you have to ask the OTs.

My previous experience taught me that I need to follow rigorously the instructions ... working procedures in this country might be different in the other country ... If I am stuck at some stage, I need to ask my supervisors.

Of interest, Linley had developed a reflective practice through which she monitored her progress and analysed challenges. For this *meta-cognitive self-knowledge*, she employed a written journal. This, she said, was to

... try to learn something and ... avoid what is not so good in the future and to enhance what is good ... if I don't write them down [my feelings] I will never learn ... I will never try to analyse myself, that is very clear, and I can see from a diary ... my progress and my changes.

Time 2

The OT students undertake multiple placements, some of these only a few days in length. As such, at Time 2 Linley was speaking after her first placement and was mid-way through a short hospital placement. Linley drew on her previous experiences to *remember* and understand *factual, conceptual, procedural* and *metacognitive* knowledge. She was also now able to *apply* and *analyse* some of these experiences to the extent that she could continue that thinking through to *evaluation* and, in one case, the *creation* of a coherent whole – an understanding in which multiple elements were brought together and consolidated.

Linley recalled that in advance of her second placement she had held many concerns including workplace procedures and finding her way around a large hospital. To alleviate these concerns, she acted proactively. She gathered *factual knowledge* about the context of her placement by visiting the town and the hospital site, viewing the hospital map online, and reading “documents about the worksite of [the] hospital and several documents about where it is and where I can park”. After this, she attended a two-part orientation organised by the hospital.

At Time 2, Linley talked far less about her experiences in China and there was little *remembering* in her narrative. Rather, her focus turned to *conceptual knowledge* in which she linked theory and practice, to *procedural knowledge* in terms of conducting patient assessments, and to her ability to learn from these experiences to create new understanding: her *metacognitive knowledge*. The following

narrative excerpts are taken from Linley's Time 2 interview and illustrate both her growing confidence and the importance of the supervisor relationship in her learning:

I observed my supervisor do her job. I tried several times to do the assessments or talk with the patients by myself, with supervision...

Yesterday and today we had five new patients ... and we conducted the initial assessment. ... I really had opportunities to present an assessment...

... my supervisor, she is pretty good and she can answer my questions carefully and in detail. ... I can learn a lot...

She gave me the documentation for the patient and I can learn from that, and she gave me the cognitive assessment and she let me read. Maybe tomorrow or Friday we will come back to maybe [the] cognitive preparation for the assessment. ...

... she showed me how to do that and she just encouraged me to do that in cooperation with her. ... If she has enough confidence she will allow me to talk with the client by myself and she [will] just observe me.

At this point, Linley returned to the subject of her coursework. She talked in particular about the unit “principles and practice”, which she had completed. Linley *remembered* that in her first placement the number of abbreviations had been challenging. This made it difficult to negotiate the written documentation provided at the hospital, and so she had sought to *understand* them. Linley overcame her initial reluctance to ask questions and emailed her lecturer for help. The list of common abbreviations received from that lecturer enabled her to prepare carefully and to *apply* this knowledge in her

placement. The difference this made was clear from her initial description of being “so confused” to her later description of becoming “really confident to read the documentation by myself ... because I have prepared some of that”.

At Time 2, Linley was less focused on her previous experience of a competitive workplace. Rather, she focused on the teamwork she was now encountering as an intern at the hospital. She commented:

...the working process is totally different in Australian hospitals. So I need to get used to that. ... I think the most significant thing is teamwork, you know the multiple disciplinary teamwork. ... that is pretty good and I need to get used to it!

Of particular interest here, Linley *evaluated* the involvement of multiple disciplines and realised that this approach made a difference to patient care:

...people can work for the patient in different points of view and people can cooperate with each other. So that is comprehensive for the patient. ... It might be the most important thing in my day.

This is an example of *creating* new understanding by bringing together *conceptual knowledge*: the interrelationships among the basic elements within a larger structure.

Prompted by the interviewer to recall her experiences as a doctor, Linley appeared to be creating a more personal understanding of practice as an OT such that she was now highlighting the differences being a doctor and an OT:

... [as a doctor] my previous experience really helped me a lot about understanding the terminology, the medical terminology. [However], I think it's not that useful because OT is

really both the treatment and the diagnosis of a patient. ... as an OT we need to find out what is the most important problem which [is] affecting their daily life.

From this she was able to *conceptualise* her knowledge and to “use the knowledge in a practical way” as an OT.

Time 3

At Time 3, at which point her placements were complete, Linley did not begin by *remembering* her pre-sage knowledge in order to *understand* her new experiences. Rather, she reflected from the point of understanding. At Time 3, her narrative consistently concerned the creation of a coherent whole. Here, whilst she still voiced concerns and challenges, these were situated in the context of her studies and in relation to how they might be overcome.

Linley also began to think from a program perspective, suggesting enhancements to the placement experience. For example, she suggested that international students might be permitted slightly longer placements so that they can familiarise with different workplace cultures prior to a focus on learning.

In summary, Linley came to the OT program with relevant disciplinary skills and knowledge including her work as a doctor in China. As an international student, she encountered challenges relating to workplace culture, terminology and language, and was initially reluctant to ask too many questions. Linley drew on her WIL experiences to make sense of her learning by documenting her reflections and challenging herself to critique achievements and challenges. From this she made informed decisions about how to advance her learning needs.

Case 2: Adinda Pane

Indonesian OT student Adinda moved from Indonesia to Australia for his final year of high school. His undergraduate degree was in

sports science during which he undertook coaching placements with students. He described his previous placement role as “helping” rather than leadership. The three one-day placements included a children’s soccer club, a women’s hockey club, and a hospital. As a graduate student undertaking an OT hospital placement, Adinda had been surprised to find, “we actually have to meet with the clients and show what we’re doing”.

Adinda worked part-time at a food mall for “extra spending money”. In this role, too, he described a passive role: “the boss just taught us what to do”. The boss was also the answer when conflict arose with customers: “if they’re getting a bit rude then just call the boss, sometimes the boss can get quite rude with the customer”. Asked how he would overcome such challenges himself, Adinda responded that he would still ask his supervisor: “you have to call in the boss”.

Whilst he noted conceptual, procedural and cognitive knowledge at Time 1, Adinda’s cognitive process was limited to *remembering* with just one occurrence of *understanding*. There was as yet no evidence of problem-solving skills. Adinda’s functional and conceptual development is shown at Figure 3.

Time 1

Adinda’s forthcoming placement was located in a large city hospital, and he was looking forward to it. Asked what he might be doing during the placement, he had little idea of the workplace:

I don’t know, I was looking for it but I just couldn’t find information - it just said like OT Department ... probably just like going around the ward, or just clinic maybe.

Adinda possessed *factual information* about the appropriate OT practice model and he was able to anticipate the role of this “with all the interviews and dealing with clients”. Adinda also appreciated the opportunities he had had to practise his skills in class: “we kind of

practise with each other”. Admitting that he was “maybe forgetting some of the stuff that I need to remember”, he was concerned about applying his lab-based skills in the real world environment.

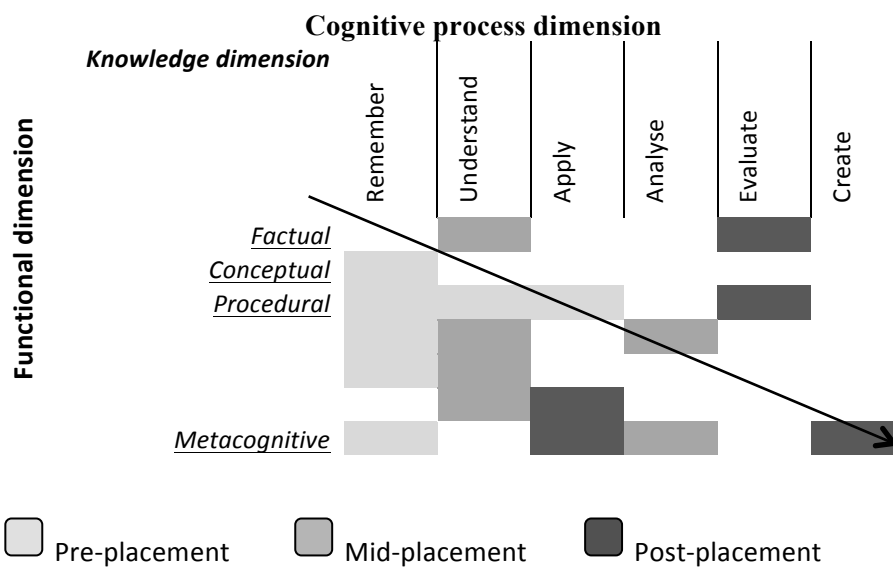


Figure 3: Adinda, functional and cognitive occurrences

Adinda was asked whether he had any concerns about the placement. He was particularly concerned about communicating appropriately with people of different ages, which would be an experience unlike those in class:

... ‘cause when you’re practising with each other, you kind of know the person, and when you go into a hospital on the placement you usually handle with all the generation, and you have different beliefs and values in the younger generation, so it’s kind of difficult really because what they’re saying might not be, you might not understand ... I have to kind

of look closely and just to show them the respect so they don't get angry at me.

He planned to overcome any angst by being friendly and respectful: “assure them that you’re actually trying to help the person, so with all my powers and abilities I’ll be helping them sort of thing, and just smile really so they don’t actually show you any frustration or anything”.

A second concern related to language: “English is not my first language so it could get difficult sometimes, but other international students, they speak English as their first language so it might not be as difficult for them compared to mine”.

Adinda spoke about the importance of a good supervisor and linked this with being able to maximise his opportunities to learn. He also understood the need to ask questions as part of the learning process. Here, he was *remembering* his previous experiences and drawing these together to form *metacognitive knowledge* at a basic level. His intention to ask questions differed from the experiences he described in previous situations. This might relate to maturity since his undergraduate experiences, and also to commitment to his personal development as an OT professional.

“... if you get a good supervisor, that would be a positive because you can talk to them very easily and probably just ask a lot of questions ... you actually have to ask them what it is so we can learn from it and get an understanding ... as long as the supervisor is very approachable it makes it easier for me to ask questions”.

Time 2

At Time 2, Adinda’s responses ranged between *understand*, *apply* and *analyse* on the functional dimension; he presented factual, procedural and metacognitive knowledge. Adinda was mid-way through

his OT placement at a large hospital. Asked about his preparation for the placement he noted simply, “I was supposed to email the prac site”. Later in the interview, when asked whether there was “anything you would do differently to prepare for your next placement?” he responded: “*Oh, not really*”. This warns of a continued lack of pro-active or independent behaviours in advance of his placements.

Once in the placement, however, Adinda described a deeper engagement. He was, for example, preparing for client interviews the night before: seeking to *understand* the procedural aspects of the task at hand. He also recommended that other students take time to read employers’ booklets on orientation and assessments. These were his first mentions of the need to prepare. Similarly, when he realised that the hospital used a different OT assessment model, he noted that he could “still reflect on what we have learned to use with the models the hospitals use”. As such, he was making sense of the new model by drawing on his experience. This illustrates theoretical knowledge applied in a workplace setting alongside knowledge of his individual cognition (metacognitive knowledge).

When interviewing OT clients, Adinda found that they would often “talk about something else”. His sensitivity about offending someone led him to be wary about interrupting, and he was relieved that his supervisor would help him stay on track if needed. He did not reflect on his experiences beyond the reporting phase, however, even when prompted. Although Adinda responded to several questions with comments about not “remembering the details”, he had not thought about ways to improve his practice. The supervisor relationship was dominant in Adinda’s account of his placement.

Time 3

At time 3, Adinda was *understanding, applying* and *evaluating* his functional knowledge and also his cognitive process related to factu-

al, procedural and metacognitive knowledge. An ongoing challenge was his ability to write client notes.

[My mentor] helped me with the case studies ... if I can remember, I think she was saying that my notes / report is a bit lacking so I need to improve more on that. ... she just told me that I need to expand more on my explanations ... at the end, she put it on the comments, the report card of the placement.

Asked what he might do differently in the next placement, he conceded that improvement was needed:

I'll probably do the same thing again, probably try and expand a little bit on my note writing skills.

Adinda was also asked what he had done independently to improve his note writing skills, and he responded that he was not doing anything; rather, he was waiting for note writing to be covered within his course. He *understood* the need for improved skills, but he was not yet taking responsibility for their development:

... we haven't really done anything practical this semester, not with the report writing so I haven't really been practising on this.

Although Adinda was still not reflecting on his practice and he was not yet illustrating learner autonomy, he was now more aware of the need to make sense of situations and to adjust accordingly. This demonstrates his application of metacognitive knowledge:

... in some cases I had to call the client from the ward and then we actually do the sessions, and doing the sessions I was mostly, like, listening and observing, yeah. I guess you just have to learn on the spot as well: what sort of routines the supervisors are doing so, so you can actually just follow whatever's there for you to learn.

He also demonstrated more developed skills in managing communication difficulties. In this case, it was the language of the client that caused problems:

... there was one [client], she spoke Mandarin and she hardly speak any English, so um, yeah, we had difficulty understanding what she was saying. ...

You just sort of have to break it down, you have to make it simple, and sometimes we have to like show pictures, so something like that.

This was the first time Adinda had described the use of problem-solving skills, and at Time 3 his practice of relying on someone more senior was giving way to more independent thinking. This was an example of Adinda evaluating *procedural* knowledge and then using his *metacognitive* understanding to *create* a new approach, albeit with his supervisor's assistance.

Case 3: Kiri Swift

Kiri came from Iowa in the United States of America. Her first language was English, but she studied Spanish for four years and considered herself to be moderately fluent. While Kiri encountered challenges related to cultural differences, language did not factor as a barrier and being bilingual was reported as beneficial. Figure 4 shows Kiri's development across the functional and cognitive domains at the three points of her work placement experience.

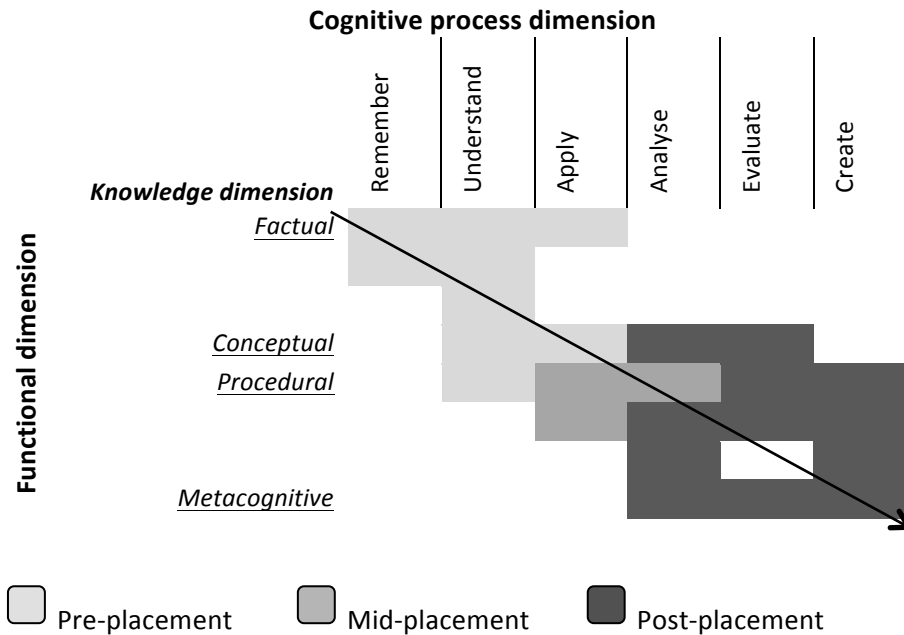


Figure 4: Kiri: functional and cognitive occurrences

Time 1

Kiri had previously been employed in health-related roles and at the time of her placement, was working at a fitness centre. Personal experiences had acted as intrinsic motivators for studying OT and, according to Kiri, “inspired me to help people like that”. Kiri’s previous work experience augured her well for working in an OT context as she had already encountered challenges when working with both clients and staff, and had devised strategies for managing conflict. Kiri’s ability to retain composure in a stressful work-based situation is evidenced by the following quote:

I think I am good at just being calm, you know, like patients sometimes are really grumpy or just, like, “Get out of my room” or whatever. I ‘m just, like, “Okay!” I think I’m good

at taking the heat sometimes ... It doesn't really bother me anymore.

Kiri's continuum of development (Figure 4) reveals her fairly rapid development from factual to procedural in the functional domain, and application in the cognitive domain. Kiri's self-confidence and self-efficacy contributed to her ability to progress into more complex roles in the first phase of her placement. She also used reflection early in the placement as a tool for recognising both her personal strengths and possible gaps in her learning. She referred specifically to Gibb's (1988) reflection cycle, noting that reflection "makes you think about the positives and the negatives".

Despite still being in the early stages of the placement, Kiri was already looking ahead and identifying herself as a future professional:

I can't wait to graduate so I am not a student any more and may be seen as more of an adult professional than a student.

Kiri recognised the valuable support mechanisms essential for success in the workplace and development of professional skills. Furthermore, she connected the theoretical knowledge acquired in the university setting with the practice-based environment.

... they set us up with a mentor, two mentors that are a year ahead of us, one of them is American so that's actually really handy. I ask a million questions. He's probably really sick of me!

While Kiri highlighted several challenges that emerged from working in an unfamiliar cultural setting, she was sufficiently astute to recognise the benefits of gaining experience in a situation dissimilar to her own.

... just working with OTs in Australia and seeing like the differences, I'm really excited about that and just to experience new things that I haven't seen in OT.

Time 2

Kiri's foundational capabilities enabled substantial progress at Time 2; this prepared her to transition from conceptual to procedural in the functional dimension. Kiri traversed the application and analytical cognitive domains whereby she applied theoretical knowledge in the practical setting and was cognisant of experiences that prepared her and optimised performance in the workplace environment. At this stage of the work placement, Kiri was mindful of the value of observation days and supervisors' feedback in equipping her with the skills and knowledge for success. She also commented on the value of theories and concepts covered in the university setting.

While Kiri demonstrated confidence during the work placement, as an international student she raised concerns about the unfamiliar environment and challenges relating to practicalities such as travelling to and from work:

I guess I expected to do an orientation on Perth and public transportation and stuff like that, so I kind of had to sort that out.

Kiri's motivation and resilience enabled her to manage multiple challenges and maximise the benefits of new experiences, which she enjoyed:

I was very excited to work with kids, and I never worked at a school and stuff like that so, yeah, I was really excited about that.

Asked how she had managed challenges, she again demonstrated the ability to reflect on her experience and draw on the expertise of others.

I think just being given the opportunity to do it with [placement site] has made it a success, because that's something that I really wanted to do – to be out in the community. Having a really good supervisor has helped make it successful. As an international student, I think I got really lucky because the OTs that I was working with, a lot of them, were from overseas ... it was great to talk to them and get their advice.

Time 3

Figure 4 highlights Kiri's rapid development in engaging with the more complex cognitive processes and the metacognitive knowledge dimension. At the Time 3 interview, her ability to think analytically and create knowledge with reference to procedural knowledge is evidenced by the following quote:

I wish I could have done more with the person I was with – [if she] would have like kind of pushed me to do more.

Kiri drew constantly on her background knowledge and experiences to extend her conceptual capabilities, thereby enabling her to transition into the realms of metacognitive thinking and behaviours. This is evidenced by her ability to evaluate her experience post-placement and to make comparisons across cultures and appreciate the value of intercultural collaborations.

When asked what she would do differently in relation to future placements, Kiri's growing confidence was evident: "I'd like to be hands on and do as much as I can ... Just being able to do more practical stuff". Following the placement experience, Kiri was competent in evaluating her personal knowledge, growth and behaviours. She was also able to ascertain how she could address weaknesses in

her performance. Further, she demonstrated the capacity to appreciate that there are different ways to manage situations: “It was good to see how different OTs do things, like the same situation but they might do different activities.”

When quizzed on her sense of identity, Kiri’s professional identity had shifted post-placement from student to professional: “I might just say occupational therapist more now. I don’t know why - I feel like since I’m done with that first semester, it feels, I don’t know, real.”

Discussion

Feedback and support from workplace supervisors featured as a key component of a quality experience for these international students, who particularly valued mentors who provided constructive feedback. The robust feedback provided on the process of learning and the enactment of skills enabled the students to conceptualise their learning and identify the strengths and gaps in development through facilitated reflection (Hodges, Eames, & Coll, 2014). The dynamic interaction with the workplace supervisor ensured a developmental approach to skill development and instilled confidence in the students to self-assess workplace proficiency. They valued the input and support from role models with relevant industry expertise and perceived this as integral to a quality experience.

Each participant in this study was unique in his or her experience, cultural capital and personal strengths, all of which impacted on the manner in which the students engaged with the workplace experience and their attainment of employability capabilities. Despite this diversity, the progression through the functional and cognitive dimensions consistently shows advancement from foundational skills to the more complex skills of analysis and critical thinking (Figures 1, 2 and 3). Evident in the interviewees’ comments is the opportunity to scaffold learning and skill development in the workplace sce-

nario. As proficiency advances, confidence grows along with the willingness to take on more complex tasks. The consistency evident in student progression highlights the personalised experience workplace learning affords (Hodges, Eames, & Coll, 2014).

Students relayed the importance of clearly articulated learning outcomes with aligned assessments undertaken in a supportive environment. They also emphasised the developmental relevance of authentic, work-based experience. In addition, preparation prior to the placement was deemed crucial to mitigating potential challenges resulting from their lack of preparedness (McNamara, 2011). Collectively, these curriculum components facilitate students to make meaning of their experiences and to connect their practice-based learning to theoretical concepts. We contend that a disconnected, ‘bolt on’ WIL experience is potentially more destructive than constructive to learning as there is the potential to diminish confidence through threatening and intimidating experiences with inadequate preparation and poorly structured, incoherent curriculum (Billett, 2011).

Seeking to evidence the impact of WIL on student work-readiness, Smith, Ferns and Russell’s (2014) study of over 6000 student participants identified the following dimensions integral to a quality WIL curriculum:

- Authenticity of the placement
- Preparation and induction processes for students
- Debriefing sessions that enable reflection on the experience
- Quality supervision
- Alignment of the placement and assessments to WIL appropriate learning outcomes with scaffolded skill development and robust feedback

These quality dimensions were further explored and verified in a later study (Tan, Flavell, Ferns, & Jordan, 2016) which garnered input from an expert panel on quality dimensions for Australian students undertaking international placements. The findings from both studies are exemplified in the student interviews showcased in this chapter, in which interviewees' responses resonated strongly with the quality elements listed above.

While the challenges specific to international students are evident, the students in this study appeared motivated to succeed and to overcome adversity. Their motivation stemmed from a strong belief in the advantages of workplace learning in an unfamiliar cultural context, which they positioned as a mechanism for increasing the likelihood of long-term global mobility (Clements & Cord, 2011). The experiences of international students affirm the quality dimensions of a WIL placement, all of which are relevant to domestic students. However, the "highly variable construct [of WIL] where student outcomes are dependent on the learning support provided" (Ferns & Zegwaard, 2014, p.181) is especially challenging for students undertaking the experience while negotiating the challenges specific to international students.

Conclusion

We begin the conclusion by acknowledging that the sample reported here was small. The three cases were selected at random, and they varied in terms of background, learning mindset, gender and reflectivity. However, there remain questions such as whether students whose first language is English are better able to express their insights and reflections, and the extent to which previous work, life and community experiences impact students' reflective practices. The learner development along both cognitive and functional dimensions was striking, but we do not presume to claim any generalisa-

bility. Rather, we present a framework with which further cases might be examined with specific reference to the WIL experiences of both domestic and international students and both native and non-native English language speakers.

From these cases, however, we hypothesise that both individual autonomy and reflective behaviour are critical indicators of learner development. In this we draw reference to seminal texts. In terms of reflection, for example, Billett (2010) has highlighted the impact of the mindful relationship between self and work and its impact on learners' self-identity, self-awareness and personal agency. Central to this development is the *process* of reflection, which in our study was established in Linley's practice and all but absent with Adinda. Far from being a retrospective act, reflection is a cyclical process of reflection on and in action that impacts future action (Schön, 1983). Reflection also concerns "the individual's centrality to their own learning", through which learners can "make intelligent decisions about how to move ahead with their learning needs" (Helyer, 2015, p. 16). In light of this, Billett's emphasis on the *preparation for, scaffolding of and reflection on* work-integrated learning cannot be over-emphasised.

Against the backdrop of preceding investigations, this research sets the scene to explore the impact of curriculum design and the structure of discipline specific workplace practices on the outcomes of placements for international students. Given the emphasis of supervisory and mentor support from the international student participants in this study, there is further scope to investigate the role of the workplace supervisor and the academic supervisor, and how these roles might be shaped to maximise outcomes for international students.

References

- Australian Collaborative Education Network. (2015). National strategy on work integrated learning in university education. Melbourne: ACER. Retrieved from: <http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf>
- Australian government. (2016). *National strategy for international education 2025*.
- Australian Industry Group. (2015). *Progressing STEM Skills in Australia*. Sydney: Australia.
- Barber, M., Donnelly, K., & Rizvi, S. (2013). *An avalanche is coming: Higher education and the revolution ahead*. London: Institute for Public Policy.
- Barnett, R. (2007). *A will to learn: Being a student in an age of uncertainty*. Berkshire: Open University Press and Society for Research into Higher Education.
- Bennett, D. (2012). *The TILE approach: Making the link between future selves and learning*. Sydney: Australian Government Office for Learning and Teaching.
- Bennett, D. (2016). Developing employability in higher education music. *Arts and Humanities in Higher Education*, 15(3-4), 386-413.
- Bennett, D., Richardson, S., & MacKinnon, P. (2016). *Enacting strategies for graduate employability: How universities can best support students to develop generic skills*. Sydney: Australian Government Office for Learning and Teaching.
- Billett, S. (2010). Subjectivity, self and personal agency in learning through and for work. In Malloch, M., Cairns, L., et al. (Eds.), *The Sage Handbook of Workplace Learning* (pp. 60-72). London: Sage Publications.

- Billett, S. (2011). *Curriculum and pedagogic bases for effectively integrating practice-based experiences*. Australian Learning and Teaching Council.
- Blackmore, J., Gribble, C., Farrell, L., Rahimi, M., Arber, R., & Devlin, M. (2014). *Australian international graduates and the transition to employment*. Melbourne: Deakin University.
- Clements, M., & Cord, B. (2011). Assessment guiding learning: developing graduate qualities in an experiential learning programme. *Assessment & Evaluation in Higher Education*, 38:1, 114-124.
- Dacre-Pool, L. D., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49(4), 277-289.
doi: <http://dx.doi.org/10.1108/00400910710754435>
- Deloitte. (2016). *The value of international education to Australia*. Department of Education and Training.
<https://internationaleducation.gov.au/research/research-papers/Documents/ValueInternationalEd.pdf>
- Edwards, D., Perkins, K., Pearce, Jacob., & Long, J. (2015). *Work integrated learning in STEM in Australian universities*. Melbourne: Australian Council for Educational Research.
- Engineers Australia. (2008). *Accreditation criteria guidelines*. Canberra: Engineers Australia.
- Ernst & Young. (2012). *University of the future: A thousand year old industry on the cusp of profound change*. Sydney: Ernst & Young.
- Ferns, S., Campbell, M., & Zegwaard, K. (2014). Work integrated learning. In S. Ferns (Ed.), *HERDSA guide: Work integrated*

learning in the curriculum (pp. 1–6). Melbourne: Higher Education Research and Development Society of Australasia.

- Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Oxford: Further Education Unit, Oxford Polytechnic.
- Gribble, C. (2014). Employment, work placements & work integrated learning of international students in Australia, *Research Digest*, 2, International Education Association Australia.
- Hagel, J., Brown, J.S., Mathew, R., Wooll, M., & Tsu, W. (2014). *The lifetime learner: A journey through the future of postsecondary education*. Deloitte: Deloitte University Press.
- Hajkovicz, S., Cook, H., & Littleboy, A. (2012). *Our future world: Global megatrends that will change the way we live*. Sydney: CSIRO.
- Helyer, R. (2015). Learning through reflection: The critical role of reflection in work-based learning (WBL). *Journal of Work - Applied Management*, 7(1), 15-27.
- Hodges, D., Eames, C., & Coll, R. (2014). Theoretical perspectives on assessment in cooperative education placements. *Asia-Pacific Journal of Cooperative Education*. 15(3), 209-223.
- Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory Into Practice*, 41(4), 212-218. doi: http://dx.doi.org/10.1207/s15430421tip4104_2
- Male, S., & King, R. (2014). Improving Industry Engagement in Engineering Degrees. In Bainbridge-Smith, A., & Qi, T. (Eds). *Proceedings of the 25th Annual Conference of the Australasian Association for Engineering Education*. (pp. 1-9). Palmerston North, New Zealand: School of Engineering

& Advanced Technology, Massey University, Turitea Campus.

- Mason, G., Williams, G. & Cramner, S., (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics*, 17(1), 1-30.
- McNamara, J. (2013). The challenge of assessing professional competence in work integrated learning. *Assessment & Evaluation in Higher Education*, 38:2, 183-197.
- Occupational Therapy Council. (2012). *Occupational Therapy accreditation standards preliminary consultation*. Perth: OTC. Retrieved from <http://otcouncil.com.au/wp-content/uploads/2012/12/AccreditationStandardsNov-2012.pdf>
- Phillips, KPA, (2014). *Engaging employers in work integrated learning: Current state and future priorities*. Richmond, Victoria. Retrieved from <https://docs.education.gov.au/documents/engaging-employers-work-integrated-learning-current-state-and-future-priorities>
- Smith, C., Ferns, S., & Russell, L. (2014). *Assessing the impact of Work Integrated learning on student work-readiness: Final Report*. Office of Learning and Teaching. Sydney, Australia.
- Tan, BK; Flavell, H., Ferns, S., & Jordan, J. (2016). *Quality in Australian outbound student mobility programs: establishing good practice guidelines for international Work-Integrated Learning in health sciences*. Office for Learning and Teaching. Sydney.
- Van Rooijen, M. (2011). Transforming 21st century corporate-university engagement: From work-integrated learning

(WIL) to learning-integrated work (LIW). *Journal of Cooperative Education and Internships*, 45(1), 5-10.

Yorke, M. & Knight, P. (2004). Self-theories: Some implications for teaching and learning in higher education. *Studies in Higher Education*, 29(1), 25-37. doi:
<http://dx.doi.org/10.1080/1234567032000164859>.