



Integrating Practice-based Experiences into Higher Education

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Chapter One: **Integrating practice-based experiences with higher education**

Providing and integrating practice-based experiences within higher education

In its various forms and across its different sectors (i.e. primary, secondary, tertiary), the project of education is essentially about the provision of experiences from which students are intended to learn particular kinds of outcomes (i.e. knowledge). These outcomes can be focused on specific content, or on processes aiming to achieve changes in students participating in them. That is, an intentional process of providing experiences to secure particular outcomes. Therefore, alignments amongst the provision of experiences, intended learning outcomes and students' engagement in learning are central to the educational project. It is this central education issue that is the broad focus of this book. More specifically, it considers and discusses how higher education students' experiences in practice settings (e.g. workplaces) can be most effectively provided and utilised in assisting students realise the intended outcomes of courses aiming to prepare them for particular occupations upon graduation. That is, how the combination of experiences provided for and engaged in by these students can best develop the kinds of capacities that will permit them to be competent in their preferred occupations upon graduation and establish bases for long and successful careers. This educational goal has become important for higher education institutions and programs as, increasingly, their educational processes and expected student outcomes are now increasingly being aligned with meeting the requirements of:

- i) occupational practices,
- ii) how successfully graduates are able to find employment in those occupations, and
- iii) moving smoothly to practise those occupations.

The expectations of government, employers and parents, as well as professional and industry bodies and, not least, students themselves, are that higher education courses will prepare students who can effectively practise their selected occupations on graduation (Billett, 2009d).

Consequently, contemporarily, university students are increasingly expected to be provided with educational experiences that will assist them develop these kinds of capacities necessary to make a smooth transition into their selected occupations upon graduation (Ellström, 2001). As a result, higher educational institutions in many countries, particularly those with advanced industrial economies, are increasingly directing their higher education provisions to realising these kinds of outcomes for their students. Also, whilst far from being a new revelation (Grubb & Badway, 1998; Torraco, 1999), there is growing acceptance that students' participation in university-based activities alone is insufficient to develop these kinds of capacities (Department of Innovation Universities and Skills, 2008; Organisation for Economic Co-operation and Development, 2009; Universities Australia, 2008). In addition, experiences in the circumstances where occupational practices are enacted are now required as elements of these courses. This recognition has led and is now leading to a greater range of higher education programs preparing graduates for particular occupations to include practice-based experiences within their curriculum (e.g. Cooke, Irby, & O'Brien, 2010; Jolly & MacDonald, 1989).

So, beyond those programs such as those for medicine, nursing, teaching etc. that have long included practicum experiences in their curriculum, a far wider range of programs now offer or include work experiences. Yet, whilst the inclusion of these experiences is helpful, more is required than just providing experiences for students in practice settings. Instead, these experiences need to be carefully considered, ordered, utilised and integrated for them to be effective (Billett, 2009c; Cooper, Orrel, & Bowden, 2010; Leinhardt, McCarthy Young, & Merriman, 1995). There are real risks that merely providing such experiences will be seen by universities as being sufficient, and/or that these experiences are mainly seen to be about opportunities for students to apply and rehearse what they have learnt in the university, rather than being the source of rich and legitimate learning experiences in their own right (Boud & Solomon, 2001), or as providing particular and salient contributions for the development of professional competence (Henderson, Twentyman, Heel, & Lloyd, 2006) that cannot be mediated through experiences in university

settings. Yet, even where these experiences have been included in preparation for occupations and there is recognition of their potential for generating applicable knowledge, it seems to be the exception where students' experiences in practice settings are intentionally and purposefully integrated into their program of study, let alone specific curriculum and pedagogic practices being used to enrich such integrations (Eames & Coll, 2010; Ellström, 2001). So, even in occupations where practice-based experiences have long been an essential component of the initial preparation, deliberate efforts to utilise and integrate or reconcile the two sets of experiences appear to be far from a common educational consideration (Cooke et al., 2010).

Consequently, intentional efforts to maximise students' learning from experiences with practice settings, through their integration with university-based experiences and explicitly through direct teaching and other kinds of learning experiences, has seemingly yet to become a central and widespread curriculum and pedagogical practice within higher education, although there is growing awareness of its need (Cooper et al., 2010).

This book attempts to begin to redress this situation. That is, to elaborate the reasons behind and processes for providing and integrating the contributions of work experiences within higher education programs. This outcome is aimed to be achieved through a consideration of how higher education curriculum and pedagogic practices can be best organised and enacted to secure more effectively the utilisation and integration of students' experiences and learning in both practice and university settings. Beyond considering what universities, higher education teachers and practice-based supervisors can do to order, organise and enrich students' experiences in both these settings, there is also a need to consider how students themselves can most effectively engage and learn through these educational provisions. That is, in what ways do students' agency and personal epistemologies need to be developed and enacted in ways that support the effective utilisation and integration of learning experiences in both of these settings (Billett, 2014; Campbell & Zegward, 2015).

So, beyond a consideration of curriculum and pedagogic practices associated with integrating these experiences, there is a need to consider how best to generate students' capacities to become active and agentic learners in optimising those experiences and securing integrations and reconciliation of those experiences. There is a broader educational purpose here: through developing their personal epistemologies in ways that assist their initial occupational preparation, the students are also provided with the means by which their ongoing learning across lengthening professional working lives can be supported (Billett, 2009b). That is, preparing them to be active and intentional learners across their working lives. Hence, considerations for organising and enacting effective higher education provisions extend beyond those associated with identifying and enacting effective curriculum and intentional pedagogic practices to include developing students' personal epistemologies.

Need to integrate practice-based experiences in higher education

It follows that this book seeks to advance both understanding about and practices for effectively utilising and integrating practice-based (i.e. workplace and work practice) experiences within higher education courses and programs. It thereby directly addresses and informs a key contemporary challenge for higher education: maximising educational outcomes from students' practice-based experiences. This challenge, as noted, has become salient for the higher education and its institutions as increasingly more, if not most, university programs are now focused on preparing students for employment in specific occupations upon graduation (OECD, 2010). As in earlier times, where changes to higher education were a response to new work requirements (Roodhouse, 2007), the current move to mass higher education across many countries accompanies a growing emphasis on and focus of its programs directed towards preparation for particular occupations. In many ways, within modernity this goal has always been the key purpose of higher education and its expansion as a sector (Bantock, 1980; Sanderson, 1993). That is developing the capacities that workplaces need and, particularly, for occupations: high status occupations attracting high salaries and certainty of employment and advancement (i.e. worthwhile work). Even though since the formation of modern nation states and industrialisation, many higher education programs focused either on the liberal arts or had broad disciplinary focuses (e.g. science, technology, engineering), these programs still had clear

occupational intents (Bantock, 1980). Much of the so-called liberal education offered in European universities was, in reality, focused on educating middle-class children for roles in government, diplomacy or even clergy. That is, clean, secure and worthwhile work. So, their intent was quite specifically focused on providing employment for these select students and in ways that positioned them with a significant educational advantage in labour markets. Not the least here was a concern for these so-called liberal arts programs to deliver graduates into relatively well-paid and secure the kinds of 'white-collar' work that was clean and worthy of middle-class citizens (Elias, 1995). Moreover, the establishment of universities focused on science and technology were very much focused on preparing professional workers for a range of emerging occupations in industrialised economies and also with national economic competitiveness clearly a high priority (Elias, 1995). In fact, the establishment of modern universities in many European countries occurred after their various industrial revolutions were quite specifically directed towards meeting these goals. Indeed, their establishment was often premised on beliefs that the ancient universities were not the best institutions for these applied disciplines to thrive (Sanderson, 1993). Hence, because of imperatives to remain economically competitive and adopt and extend the technologies offered by industrialisation and a growing acceptance of the worth of applicable knowledge, many universities which are now considered prestigious (e.g. University of London) were established to achieve these particular kinds of purposes (Roodhouse, 2007). That is, to be well aligned with applicable outcomes that had direct and identifiable economic applications. However, these specific purposes and economic imperatives were mainly to be realised through wholly institutionally-based education provisions and through teaching. Now there is a growing focus on providing workplace experiences as part of this educational provision.

Nevertheless, there are long and ongoing traditions of practice-based experiences within university courses. These provisions at least date back to Hellenic Greece (Clarke, 1971; Elias, 1995), but also more contemporaneously. For instance, work-based experiences have become almost emblematic within the cooperative education movement of North America (Eames & Coll, 2010), internships in many higher education programs, and the earlier tradition of sandwich programs in the United Kingdom. More recently, the foundation degree programs within United Kingdom higher education and the work-integrated learning movement in Australia, and initiatives in a range of other countries, such as those referred to as 'service learning', have continued those traditions. Seemingly, the common concern across these initiatives is to provide students with work or practice-based experiences that augment those that are provided in university settings (Billett & Henderson, 2011). Noteworthy, is that all these initiatives include the provision of experiences in practice settings where students are engaged in work activities associated with the occupation for which their education is focussed. That is, rather than just having experiences in the world of work beyond the university, students are engaged in authentic instances of the particular occupational practices for which they are being prepared to work. Hence, in contemporary times, universities' educational provisions are focused on developing graduates' capacities in more occupational specific ways than in earlier times (Boud & Solomon, 2001). It is expected that these programs will not only address the needs of specific occupations more effectively, but intentionally focusing on preparing graduates who are able to secure employment in their chosen occupation upon graduation and then sustain their employability through having the capacities to remain employed and advance their careers (Ellström, 2001).

At least four factors are buoying the interest in these kinds of educational imperatives at this time. Firstly, they are shared by governments, who have a strategic interest in higher education securing important social and economic goals. Secondly, industry sector professional bodies are also demanding employable outputs from higher education systems, as, thirdly, are enterprises that employ graduates and individually or collectively make claims about how higher education provisions should be funded and enacted. Fourthly, students who are increasingly funding their own higher education, and becoming indebted in doing so, also want programs that assist them secure employment, through adequately preparing them for smooth transitions into work. Hence, governments want state investment in higher education to lead to employable graduates and workplaces that are sustained and advanced by having employees who are educated in ways to achieve these goals. That is, the generation of capacities that can contribute economically and socially and also can avoid individuals becoming unemployed or, far worse, unemployable.

All of these needs have led to heightened expectations and also a growing improbability of being able to meet all these expectations. On the one hand, there is a need to fulfil the requirements of professional bodies and agencies employing people in particular occupations (e.g. education systems employing teachers, healthcare system employing nurses etc.). Yet, there are also the specific skill requirements of particular workplaces and the variations across them, even when the same occupation is being practised (e.g. being competent with particular kinds of students, or performing specific kinds of nursing roles). Then, there are the expectations of students who are increasingly making contributions (and investments) in their education in terms of time commitments and actual financial costs for their education and who are increasingly enrolling in programs that have a specific occupational focus. However, there is not always a match between the numbers of students graduating and available jobs in the occupations for which they have been prepared. It follows, therefore, that there are a range of challenges in meeting the demand for and expectations of job-ready graduates in terms of fit with particular workplace requirements and the quantum of graduates.

Meeting the demands of generating job-ready graduates

So, how do higher education institutions begin to meet these needs? There are a range of demands that need to be met for higher education institutions to provide programs and experiences that effectively prepare graduates to move smoothly into employment and be effective within their occupational practice. These demands include capacities, resources, links to workplaces and the skills of educators. Whereas providing practice-based experiences has long been the case in occupations such as medicine, law and accountancy, and teacher and nurse education programs, the demand for these experiences is now becoming far more widespread and, almost universal (Billett, 2009c). The need is to provide these kinds of experiences, and then to make them worthwhile, of suitable duration, and for them to generate the expected learning outcomes. In some instances, these experiences are being enacted across degree programs, entailing significant periods of time away from the university in practice settings (i.e. as in sandwich programs, internships, cooperative programs) sometimes as employees of their host organisation, but also they can be unpaid placements (i.e. internships)(Molloy & Keating, 2011). There are also shorter periods of time to be spent in those settings as an element of a specific program or course (e.g. teaching practicum or clinical placements) where these experiences are usually focused on educative experiences (i.e. achieving particular educational outcomes at that point in their program) (Newton, Billett, Jolly, & Ockerby, 2011). Then, there are those kinds of experiences provided towards the end of degree programs (e.g. nurses' graduate year rotations), that seek to extend what has been learnt in the university or assist the development of occupational or even specialist capacities. As noted, however, these experiences are perhaps most commonly directed towards the educational goals of: i) students being able to enjoy a smooth transition into their selected occupation upon graduation and ii) having the capacities to be immediately effective in their work (Billett & Henderson, 2011).

As noted above, beyond these immediate instrumental purposes, although not always made explicit as an educational goal, is the important outcome of developing graduates' capacities to become and continue to be active learners who are able to direct and enact much of their ongoing occupational development across their working lives. Indeed, as students, this capacity of being relatively self-initiating and interdependent as learners is a requirement for optimising their learning during their practice-based experiences. So, to be effective in learning to perform competently during their placements, and also in their attempts to reconcile what they have learnt in their courses with what they are experiencing in work settings, and vice versa, these interdependent qualities become essential for effective higher education experiences. Later, and once employed, it is these kinds of capacities that will be central to their retaining their professional currency as work requirements change, and securing advancements in their careers. This is because in neither their initial preparation nor their on-going development can they rely on teacherly engagements to secure the requisite knowledge for sustaining and then advancing their occupational practice. All of this suggests that, beyond developing the technical and social knowledge required for the effective performance of their selected occupation, higher education students need also to develop the kinds of capacities and personal

epistemologies to become active, engaged and intentional learners (Billett, 2009c). Consequently, the totality of the educational purposes here are associated with:

- i) assisting students understand about the world of work for their particular occupation,
- ii) developing the canonical knowledge of the occupation,
- iii) understanding of how that knowledge is manifested in the particular workplace practice setting where graduates might find employment and be expected to be performed for a smooth transition to practice effectively and
- iv) developing individuals who can be effective in managing their own learning needs for and through their professional working lives.

Yet, despite the collective expectations of government, industry, employers and students, it is important to re-state that realising these educational outcomes, particularly the oft-demanded 'job-ready graduate' is a very demanding, possibly unreasonable and unrealistic goal for higher educational programs and institutions. By most measures, these expectations represent very demanding (i.e. tough) educational goals. For instance, it may not be known where graduates will find employment upon graduation (i.e. in which kind of workplace) and, therefore, what particular variations of the occupational practice they will be required to be competent. Not knowing the circumstances in which they will find employment or what performance requirements are needed in the place of employment makes the task of preparing students for a smooth transition into occupational practice quite difficult. Importantly, the requirements for occupational practice are far from uniform across the range of work settings in which their selected occupations are enacted. The requirements for practice can be quite situational, even when the same occupation is being practiced (Billett, 2001a). Consequently, ideally, the development of the capacities required for smooth transitions into employment needs to comprise the development of both the canonical (i.e. the occupational knowledge that all practitioners need to know and to be able to utilise), as well as the specific requirements of particular workplaces.

Given that occupational requirements will differ across workplace settings there can be no confidence that either general prescriptions (i.e. occupational standards) alone, or those developed in and for one particular practice setting, will be applicable for effective practice in others (Billett, 2001a). For instance, the tasks performed by nurses or doctors in a specialist ward in a major metropolitan teaching hospital may be quite different from counterparts working in regional hospitals, doctors' surgeries, specialists' clinics, aged care facility or community based health programs. The first named circumstance (i.e. large metropolitan teaching hospital) is typically one in which student doctors and nurses have their clinical experiences as part of their initial educational programs. Yet, the circumstances where they secure employment after graduation may not be of the kind they had experiences of as a student and, therefore, there may be requirements for performance that are beyond what they have experienced in, or about which they are competent. It is not just the technicalities of the work that might be different (i.e. the kinds of professional tasks they confront), but also the means and organisation of work practices. Then, there are the kinds of patients they have to attend and the particular goals of those practice situations. Analogously, the same issue plays out in distinct ways for teaching, physiotherapy (Molloy & Keating, 2011), midwifery (Sweet & Glover, 2011) and, probably, most, if not all, occupations. Then, there is also the broader educative goal of preparing students to be independent and effective learners in practice settings.

It follows, therefore, that meeting the growing expectations for students to be 'job-ready' on graduation constitutes a demanding educational project. However, as noted, likely those who advance such expectations and requests that they be met (e.g. professional bodies, industry groups) are unaware or uninterested in the educational demands arising from such expectations. Probably few of those advancing such demands (i.e. governments, industry spokespersons, professional bodies) may comprehend the range of factors that influence the prospect for fulfilling these expectations. Indeed, the task of meeting these requests needs to reside with those who have some understanding of their complexities, and are informed about and empowered to effectively fulfil those demands. Hence, understandings about curriculum, pedagogy and students' personal epistemologies, models of effective practice and clear intents and principles for practice

are likely to be required by those undertaking this task, such as university teachers and students' workplace supervisors.

There are strong evidence bases for advancing how the project of meeting these demands might best progress. Foremost and fundamentally, there is a need for experiences to be provided in authentic work settings that are within the scope of the occupational capacities to be learnt. Some established models of these kinds of experiences already exist. The common practice within hospital-based nurse education, for instance, was for novice nurses to rotate through hospital wards (e.g. general, oncology, birth, emergency, mental health etc.) to experience variations of nursing practices and through the range of nursing situations available at that hospital. This model of occupational preparation was premised on novice nurses having access to a wide range of nursing experiences in a range of hospital wards with particular healthcare focuses, and through these rotations to develop their capacities to nurse in whatever kinds of wards they would be employed. What is similar between this model and most kinds of apprenticeship approaches to occupational preparation is that those who are learning spend extensive periods, indeed the majority of their time in practice settings of the kind where the occupation is practised (e.g. as nurses and tradespersons). Yet, for students who largely based in universities and only spend a fraction of their preparation time in the practice settings, the pathway of experiences to developing occupational capacities probably needs to be of a different kind. Certainly, the anticipated outcome of students being 'job-ready' on graduation cannot be realised through experiences within university settings alone.

So, firstly, there is a requirement for students to engage in occupational practice during, and indeed, throughout their courses, in order for them to access experiences from which they can secure the capacities they need to fulfil the expectations of being competent practitioners. Secondly, there likely has to be experiences that can assist these students understand and practise variations of the occupational practice that, in turn, will assist them more readily adapt to situationally-distinct requirements of their work setting. As noted, these requirements might be different from what they experienced in their preparatory program. Added to this goal is also the need to generate agentic qualities in higher education students for both success in their initial occupational preparation and then their working lives beyond graduation. But on what bases should teachers in higher education progress with the provision of these experiences? What is the educational worth of these approaches?

The worth of occupational emphasis within educational provisions

What constitutes the worth of educational efforts is shaped by social and cultural norms and personal sentiments. An educational emphasis on securing outcomes associated with developing capacities required for particular occupations and paid employment is often seen as controversial. That is, when it does not involve preparation for the major professions (e.g. medicine) or other occupations valued by the observer. For instance, preparation for being a philosopher, sociologist or anthropologist might be seen by some as being inherently a worthwhile and legitimate outcome of educational endeavours, whereas an occupational preparation to be a hairdresser or an entrepreneur might not. In some circumstances, preparation for religious practice would be seen as being even more superior to that of a medical doctor, but not always or everywhere. So, what constitutes worthiness of educational effort is subject to differing views, values and sentiments.

Most often, if not always, it has been the case that, even when not explicitly stated as such, the focus of educational efforts, particularly in contemporary post-school education, is directed towards occupational outcomes (Dawson, 2005; Wall, 1967/1968). That is, provisions of schooling, colleges and universities have long been directed towards securing employable outcomes. As noted above, even the so-called liberal arts degrees, which are often seen as being the very antithesis of more occupationally-specific educational provisions (Carr, 1995; Oakeshott, 1962), were and are very much aligned to securing the kinds of worthwhile employment aligned to the needs and aspirations of individuals who were of the class and calibre to participate in university education (Sanderson, 1993). Whereas medical and law education were clearly and identifiably aligned with securing the capacities for particular occupations, liberal arts degrees were a preparation for careers in the clergy, public service and diplomatic corps (Roodhouse, 2007), just as the way

that the broad disciplines of science and engineering have a focus directed towards fields of occupations. Moreover, there has long been an emphasis within schooling for particular groups of students to move directly into paid employment as evidenced by the provision of manual arts classes, usually for boys, and clerical studies, usually for girls. In more recent times, and arrayed in distinct ways across different nation states, the provisions for specific occupational preparation have increased in the schooling sector. These include the magnet schools in United States which focus on specific industry sectors (Stasz & Brewer, 1998). The German *Fachschule*, have particular relationships with vocational schools of two kinds – *Berufsfachschule* which are full-time secondary vocational schools and *Berufsschulen* which are usually part-time schools attended by apprentices in the dual system for the off-job components of that apprenticeship scheme (T Deissinger, 2000). Then, there are technical high schools that are prevalent in some countries or those offering a provision of vocational education as part of the school curriculum. The point is that all of these programs emphasise specific occupational preparation, as well as emphasising the importance of preparing for life beyond education: participation in work life.

In these educational provisions there are direct expectations that the focus of these programs is on paid employment and securing occupational outcomes for its students, and often building the foundations for ongoing and increasingly specific occupational outcomes. Hence, their educational worth is vested in securing those kinds of outcomes. These outcomes are seen as being an important educational priority to assist young people move into adult roles, and contribute to the community, their workplaces and their own development as well as supporting national social and economic goals. Moreover, this worth is also subject to the particular mores of the time. For instance, in the 1970s, when issues of youth unemployment were not so strong, globalised agencies such as UNESCO was suggesting that post-school education should not be preparing individuals for particular occupations (Faure et al., 1972). Instead, it was suggested that, because of the constant changes that young people would face across their post-school lives, they needed to develop general problem-solving capacities that would equip them to address the challenges they would meet in their social, community and work life. An emphasis on specific preparation for occupations was seen to be non-educational in these accounts and in this era. However, such agencies are unlikely to be making those kinds of suggestions in contemporary times which feature high youth unemployment and degrees of social dislocation and competitive work and employment environments. In particular, as noted above governments are concerned about the employability of citizens, and their capacity to contribute directly to national social and economic goals, directly through their employment and indirectly through the taxation contributions to nation states. This has been a long-standing goal for educational provisions, even stated explicitly in the Poor Law in Britain, 1601, which emphasised the need for an educational provision for orphans and illegitimate children so that they would not become a burden on the community (i.e. parish) (Bennett, 1938), and also feature in the professions deemed suitable for a university-based preparation as far back as Hellenic Greece (Lodge, 1947).

Indeed, much of the rationale behind the formation of vocational education systems in modern times was to secure an adequate skill base for the work force, and for individuals to be able to secure paid employment and, thereby, resist becoming unemployed and a burden on the nation state (Billett, 2011b). Indeed, since the formation of modern nation states and the requirements of industrialised and post-industrial economies there has been a growth in the kinds of higher education provisions that support these kinds of educational outcomes. As noted, modern universities such as the University of London were established in the mid-19th century, to address a growing range of occupations emerging from the British industrial revolution, which were not being responded to by the ancient universities (Roodhouse, 2007). Similarly, elsewhere in Europe, colleges of mines, engineering and commerce were also being established to meet these nation states needs arising from industrialisation (Deissinger, 2000; Sanderson, 1993; Troger, 2002). Later, in Britain, technical schools and colleges were developed as specialised professional schools for teachers, nurses, artists and designers (Deissinger, 1994). They eventually became the basis for the English Polytechnic system, many of which have now become part of the British university system. We need also to be reminded that in both France and Germany there are apprentices who attend universities as their off-job educational provision (Veillard, 2012). Moreover, there has also been considerable qualification creep and a

growing number of occupations for whom the initial preparation is now vested within a university degree. The wide acceptance of entry-level degrees in occupations such as nursing, journalism, social work, hospitality is now being complemented by those focusing on tourism, media, viticulture, public relations and criminology, all of which have specific occupational focuses.

Consequently, there is nothing particularly new or stigmatising about an educational system whose purposes are aligned with the development of the knowledge required for specific occupations. However, what now seems to be the case is that there is new intensity in the alignment between university courses and specific occupations, which is occurring across a growing range of occupations and across a wide range of countries (Billett & Henderson, 2011). Also, as noted, there is a growing and widespread expectation that programs that have as their stated goal the preparation of specific kinds of occupations should be able to secure the kinds of capacities required for that occupation: generate job-ready graduates, particularly at a time when jobs are hard to come by in many countries. This global push seems to be well aligned with attempts to develop workforces that can meet national economic needs in an increasingly competitive global economic environment (OECD, 2010). One way in which this alignment is aimed to be secured is through engaging with professional bodies, industry spokespersons and other sources external to universities to advise about what should be the focuses of courses, what they should aim to achieve, and the qualities of what constitutes graduates from them. That is a very top down approach to ordering higher education.

With this top-down attempt at alignment with demands external to universities has come the development of uniform occupational standards and regulatory arrangements associated with occupations to which university courses have to be directed (Hungerford & Kench, 2015). Again, there are many long-standing examples of this development. For instance, professional associations (e.g. medicine, law and accountancy) have long required that their standards, content and even examinations need to form a central part of the curriculum for courses that serve those professions. Then, there are state-based requirements for other programs such as nursing, teaching and other healthcare provisions that need to be met for programs to be endorsed by professional associations (Grealish, 2015). These are often stated in terms of the number of hours of practice required or procedures completed etc. For instance, professional bodies recognising engineers request a particular number of hours of work experience, whereas midwives might be required to have completed a set number of continuity-of-care processes with birthing women before they can be registered to practice (Sweet & Glover, 2011). Therefore, it seems that along with legitimising educational outcomes in terms of securing specific occupational goals have come growing expectations, and requirements of higher education courses that are likely to be enduring, rather than cyclical. They will likely exist as long as governments need to secure national social and economic goals, enterprises and professions demand graduates who meet their requirements, and also of students who are keen to make the most of the investment they are making in their higher education.

Central to realising these kinds of educational outcomes is the need for students to be able to access experiences in practice settings that will assist develop the capacities they require to move effectively to practice the occupation for which they have been prepared upon graduation. This likely includes not just having access to those experiences, but some consideration for ordering what kinds of experiences and for how long and ways in which the integration of those experiences might progress within the overall program in which they are studying. In short, there is a growing need for students to have particular kinds of authentic work experiences and that these will need to be identified, planned for and augmented as part of the higher education provision.

Need for authentic experiences and their integration

The demands set out above are now leading to requirements for higher education students to have access to authentic instances of the occupational practices as part of their university programs. However, more than providing experiences in practice settings, there are sound educational premises for the integration of experiences in and learning from authentic instances of practice within the higher education programs. These educational premises are as follows. Firstly, there are enduring concerns about the adequacy of the transfer of knowledge learnt in educational institutions to circumstances outside of them (Ellström, 2001). This

problem of transfer is not necessarily a fault of educational provisions, but simply the fact that the physical and social context of educational institutions and the places where occupational practice is enacted are quite different (Brown, Collins, & Duguid, 1989; Lave, 1990). That is, they have two sets of purposes, activities and interactions. Yet, these are not mere background factors because it is through the kinds of purposes that individuals direct their efforts and the kinds of activities and interactions in which they engage that leads to learning of particular kinds (Rogoff & Lave, 1984; Scribner, 1984). Hence, what is experienced and learnt in one setting may not be transferable to another. Arising from concerns about the very low levels of applicability of school-learned knowledge to purposes outside of school (Raizen, 1989), has come the realisation that the kinds of experiences that learners have (Rogoff & Lave, 1984) are not merely just the context in which those experiences occur, but that there is a legacy in terms of individuals' cognition, including their learning, that arises from particular experiences. These contexts are shaped by the particular culture of the practices (Brown et al., 1989) or practice of community (Gherardi, 2009) in which they occur, and, importantly, the kinds of activities and interactions afforded by these circumstances. Consequently, the adaptability or transfer of knowledge is not just a product of students being able to manipulate and adapt that knowledge to other circumstances, although it includes that, but also the kinds of circumstances in which individuals have engaged, their activities and interactions that shape what they learn and therefore the prospect of adapting knowledge from one circumstance to another (Lave, 1988; Pea, 1987). In short, it is the kinds of goal-directed activities and quality of interactions with others and artefacts that are central to what is learnt in particular settings (Billett, 2007) and also to how that learning might be applicable elsewhere. The point here is that the development of adaptable knowledge is not privileged by school-type experiences, although these can be helpful, but the kinds of activities and interactions in which the learners engage and that are generative of particular learnt outcomes.

Secondly, it has been shown that, in many ways, authentic instances of practice provide a range of contributions that assist learning by their contributions to enriching what is experienced (Billett, 2001b; Gott, 1989). As there are particular legacies arising from specific kinds of experiences (i.e. particular activities and interactions in the educational institution or workplace), there is a growing need to identify the kinds of experiences that are generative of the kinds of knowledge students need to learn to become effective practitioners. This circumstance then leads to the need for provisions of particular kinds of experiences to assist students' learn specific kinds of knowledge required for practice. Consequently, there is an educational need to consider the kinds of experiences that can be or are provided in both practice and educational settings which are most likely to be generative of the particular kinds of knowledge that are required for effective occupational performance (Billett & Choy, 2014; Boud & Solomon, 2001). It follows then, that there is a need for curriculum and pedagogic practices that can assist to develop these forms of knowledge across authentic instances of practice and educational settings, and also to bridge the gap between what can or is likely to be learnt from those activities and interactions provided in both kinds of settings.

Thirdly, there needs to be means of assisting students reconcile their experiences across both kinds of settings and also in ways that expose them to something of the diversity of those occupational experiences (Eames & Coll, 2010; Ellström, 2001). That is, to compare students' experiences in ways that assist them comprehend their application to other related occupational circumstances and settings (Billett, 2014). This is important because the performance requirements for work differ across setting in which the same occupation is enacted. The reciprocal process of sharing different and diverse experiences across student cohorts may well be an educationally effective way of generating both rich reconciliations of experiences in the two settings as well as opening up understandings about the ways in which variations of the occupational practice arise and need to be addressed. Hence, there is a need for these authentic instances to both complement and augment what students experience within the higher educational institution and also targeted curriculum and pedagogic practices that can be enacted both before, within and after students' experiences in practice settings including those that integrate what has been learnt from authentic practice (Torraco, 1999). Sometimes in such considerations and, erroneously, a distinction is made between practice and theory. It is suggested that whereas theory can be learnt through experiences in educational institutions, practice (i.e. procedural capacities) needs to be learnt through experiences in the circumstances of practice. Yet, more

likely, procedural, conceptual and, of course, dispositional dimensions of the knowledge required to be learnt for occupational practice are developed in all kinds of settings through a learner engagement in activities and interactions with others (Billett, 1994b).

Therefore, within considerations of curriculum and pedagogic practices for higher education programs that seek to develop occupational capacities within the graduates, there is a need to consider these forms of knowledge and their reconciliation. Whilst all of these concerns are far from being new, they have now become far more accentuated and are likely to influence the practice of those who work in higher education in teaching roles. That is, organising the provision of authentic practice-based experiences for students, maximising students' learning within those experiences, and then seeking to utilise and integrate those experiences within the overall university curriculum, and in ways that students' learning, are not restricted to the circumstances of their initial learning: i.e. either the university or the practice setting in which it arose (Billett & Choy, 2014). All these goals likely require the development of new capacities and understandings on the part of those in these roles, and also complimentary capacities by those who supervise students in practice settings.

Integrating learning experiences: a challenge for higher education

In the ways outlined above, this book seeks to respond to the growing educational challenge arising from demands for higher education institutions to prepare their graduates for specific occupations and for these graduates to enjoy a successful and smooth transition to circumstances of practice that may not be known by those who plan the programs or teach in them, or are engaged in learning (i.e. students). As noted, this expectation is difficult to fulfil, because performance requirements for professional practice can differ quite widely across circumstances where occupations are enacted, as noted. Moreover, developing the capacities that permit students to be initially effective in their selected occupation requires the generation of knowledge through a range of experiences, including those in practice settings. The higher educational provision for some occupations already have highly ordered and regulated arrangements for practice experiences (e.g. teaching, nursing). Other occupations follow different kinds of long-standing practice-based arrangements (e.g. medicine, physiotherapy, accountancy, law). However, far more, and perhaps the majority of disciplines, have practice-based arrangements that are generated on a more ad hoc basis by universities offering preparatory occupation programs within the discipline, including an array of different kinds of practice-based experiences. Through these combination of experiences, there is a need to develop the canonical knowledge of each profession (i.e. the knowledge required by all who practice that occupation), and also a requirement for this knowledge to be learnt in ways that make it adaptable to the practices that graduates will encounter during their courses and directly upon graduation in particular practice settings (Billett, 2009d). There is also the important goal for preparing graduates to be effective learners across their working lives, which will largely be driven by their agency and epistemological qualities. Students likely encounter this requirement directly through their practice-based learning experiences (Eames & Coll, 2010), but may also assistance to reconcile what they have learnt with what they already know in the absence of direct teaching or reliance upon teachers.

It is for these reasons that there is a need for graduates to have practice-based experiences structured and embedded within their programs of study whose timing and duration has been carefully considered in order to meet the specific educational goals they are enacted to achieve. Importantly, these formative and constructive experiences need to be effectively integrated within the program of study, not addressed as an add-on (Henderson & Alexander, 2011). It has become apparent that it is not sufficient to simply provide students with authentic experiences. Instead, these experiences need to be integrated into the overall experiences that students have as part of their educational programs. Also, and, again, importantly, more than simply being settings in which to experience the occupational practice and apply what has been learnt in university settings, practice settings provide essential learning experiences in their own right. It follows, practice-based experiences need to be positioned to strengthen and augment what is learnt through experiences in educational institutions, as well as make their own contributions (Newton et al., 2011). Yet, if students are to participate effectively in, and learn from, their experiences in both university and practice

settings, they will need to have the occupational and personal capacities required for this approach to learning. Furthermore, capacities as agentic learners are also central to what constitutes an effective professional practitioner: that is, someone with the capacity to be able to independently appraise the processes and outcomes of their practice, and make judgements about its efficacy and how it might be improved (Richards, Sweet, & Billett, 2013).

Consequently, it is through an elaboration of these concerns and responses to them that this book aims to advance ideas about how to maximise students' learning experiences through curriculum and pedagogic practices that can integrate experiences in university and practice settings.

Studies informing this book

Much of the content of this book largely arises from two national teaching fellowships awarded and undertaken by the author. The first of these two fellowships focused on developing the agency of students who were engaged in practice-based experiences as sponsored by the then Australian Learning and Teaching Council (ALTC) (Billett, 2009a). This fellowship aimed to identify and develop strategies for promoting students' agency, both for short-term outcomes associated with our initial study, and longer-term outcomes associated with their professional practice over the longer term. It comprised projects in three Australian universities, from the disciplines of nursing, physiotherapy, human services and midwifery. The second fellowship was a National Teaching Fellowship, also sponsored by the ALTC, which comprised 20 projects across six Australian universities and from a range of disciplines as diverse as medicine, applied theatre, journalism, education, tourism, health care, public relations, management, chiropractic, engineering, human services, business, medical paraprofessionals, music, law and creative arts (Billett, 2011a). These teaching fellowships and the projects within them are informed by four key premises that reflect the discussions above. Firstly, authentic practice (i.e. workplace) experiences can make particular and potent contributions to students' learning (Billett, 1994a; Henderson & Alexander, 2011; Henderson et al., 2006). These experiences provide access to authentic instances of professional practice and expert practitioners in ways that are simply unavailable in university settings.

Secondly, the kinds of activities individuals engage in shape their learning: "activity structures cognition" (Rogoff & Lave, 1984), p. v). Therefore, providing access to activities and interactions that are authentic in terms of performances required to be learnt and practised becomes essential for learning effective practice. Currently, much of higher education students' learning is shaped by universities' institutional practices that are distinct from those that occur in the circumstances of occupational practice. While substitute experiences (e.g. moot courts, clinical skills labs and mock hospital wards) are useful, and possibly indispensable, in providing benign environments where students can develop initial capacities, they do not provide access to the full array of dispositional, procedural and conceptual contributions available in authentic professional practice (Billett, 2001b). So 'canonical' professional concepts, procedures and dispositions that might be learnt in university-settings need augmenting by understandings, procedures and sentiments learnt through experiences in authentic instances of professional practice: practice-based experiences.

Thirdly, understanding some of the variations of professional practice stands to make that knowledge more applicable to diverse instances and requirements of practice that graduates will encounter (i.e. more robust). Early views of human performance suggested that adaptability was premised on generally-applicable capacities (Bartlett, 1958), and then, on the possession of domain-specific knowledge and the capacity to manipulate it (Ericsson & Smith, 1991). However, more recently, understanding the specific and situational bases for performance to be enacted has been emphasised (e.g. (Brown et al., 1989; Engestrom & Middleton, 1996; Lave & Wenger, 1991). Hence, the development of adaptability and the competence required for practice might well be found in utilising a range of these experiences within the university setting.

Fourthly, practitioners need to be effective self-directed and agentic learners throughout their professional lives. That is, students need to intentionally develop, through their engagement with practicum environments (Jolly & MacDonald, 1989), effective personal epistemologies which will support the initial and ongoing learning required for their professional practice (Billett, 2009b). Hence, there is a need for

teachers in higher education to engage with students' experiences in practice settings to secure the development of competent professional practice. To realise these outcomes, teaching and learning approaches need to be developed to effectively utilise and integrate practice-based experiences, and secure changes in university curriculum and pedagogy.

Findings from these studies

In preview, from the projects and studies that comprised these teaching fellowships (Billett, 2009a, 2011a), five key findings emerged.

Firstly, the concept of the integration of learning experiences needs to go beyond a consideration of the physical and social settings in which students participate. There are also the personal processes of experiencing and reconciliation of what is experienced by students in each of these settings.

Secondly, and following from this, although curriculum and pedagogy are often seen as core constituents in the provision of learning experiences, added to them is also a consideration of students' personal epistemologies. Without consideration of how students engage with and learn from the experiences provided for them (i.e. curriculum) and the pedagogic practices that are enacted, our consideration of these core explanatory concepts fails to fully inform how the utilisation and optimisation of those experiences might progress.

Thirdly, merely providing practice-based (i.e. workplace) experiences for students is insufficient to achieve the kinds of learning required to secure smooth transitions to occupational practice, and the development of effective and critically-oriented professional practitioners. Instead, there is a need to enrich those experiences through preparation, engagement and opportunities to share and reconcile what has been contributed by these experiences to their overall educational programs and objectives.

Fourthly, and following from the above, the findings highlight the importance of enacting the kinds of pedagogic practices that are most likely to develop engaged and critical practitioners: agentic learners. These pedagogic practices are those most likely to permit both separately and together: i) the articulation and critical appraisal of concepts, and their reconciliation or transformation through this discussion; ii) opportunities to use specific procedures, iii) consideration of their applications and limitations and iv) understanding how these procedures come together to shape more strategic accounts of knowledge in use to address complex problems, and v) an appraisal of the kinds of dispositions that shape that practice in operation.

Fifthly, the need to engage, prepare and extend students as active and agentic learners is central to the effective reconciliation and integration of experiences across practice and higher education settings. This includes their ability to engage in professional practice and their becoming effective critical and reflexive practitioners.

The premises for claiming these contributions are elaborated across the chapters that follow this introductory chapter. They include discussions about the goals for higher education (Chapter Two and Three), nature of the integration of learning experiences and how they might be conceptualised and best progressed (Chapter Four). In addition, some pedagogic and curriculum practices for promoting the integration of students' experiences in both academic and practice settings are advanced (Chapters Seven and Eight). The curriculum practices are those referring to what comprises considerations for the intended curriculum (i.e. what is intended to be learnt and how); the enacted curriculum (i.e. what is enacted in terms of experiences for students) and the experienced curriculum (i.e. what students experience and make sense of and learn through). As is elaborated in Chapter Seven – curriculum considerations are set out, as are those associated with pedagogy and personal epistemology, in Chapters Eight and Nine respectively.

Intended objectives of this book

In progressing the goals of informing curriculum and pedagogic practice and those of educators in higher education, this book aims to secure four objectives. Firstly, it seeks to identify and delineate the educational worth of students' engagement in practice-based experiences and their integration within the higher education programs. Secondly, it advances conceptions of what constitutes the integration of such

experiences that are essential to inform how curriculum and pedagogic practices might progress in higher education institutions. In addition, drawing upon two large programs of enquiry involving multiple projects, fields of academic activity and participants, it seeks to inform how higher education curriculum might be organised to effectively provide and utilise students' experiences in practice settings. Here, consideration is given to the intentions of the curriculum in terms of how it might be designed and planned for, how these experiences might be enacted and also to how students might come to make sense of and engage effectively with these experiences. Thirdly, pedagogic practices seen to be effective in maximising the learning from those practice experiences and integrating them within the curriculum are identified and discussed. As foreshadowed, these practices can be considered in terms of what needs to happen before, during and after students engage in the practice settings (i.e. workplaces). Fourthly, consideration is given to the importance of students' personal epistemologies and how these might be developed and directed towards supporting their effective learning within practice settings and also in their professional practice. This consideration seems particularly important given that during their practice-based experiences, these students will be best served by adopting an active and focused approach to managing their own learning. Moreover, developing these capacities is important for developing further students' capacities to be self-directed, critical and reflective learners within their professional practice.

In all, this book seeks to identify and elaborate curriculum and pedagogic practices supporting the effective integration of students' experiences in practice and academic settings to maximise the prospect of them being able to move smoothly into their preferred occupation upon graduation and then practice effectively within that occupation. In doing so, it aims to contribute to current imperatives in higher education across many countries that are seeking to secure highly employable graduates from occupational specific programs. That is, these graduates will have come to learn the capacities that will make them employable and also to be sustained in employment derived from their abilities to be effective in their roles upon graduation. What is possibly innovative about this book is that it seeks to advance both strong conceptual explanations and foundations for curriculum and pedagogic approaches, and then advance principles and practices informing the utilisation of specific curriculum and pedagogic practices for an effective integration of students' experiences in academic and practice settings as directed towards securing their employability. As noted, the conceptual explanation and the principles and practices for enriching teaching and learning experiences are founded and premised upon the processes and outcomes that comprised two national teaching fellowship projects in Australia. In this way, both the conceptions and the recommendations for practice are derived from empirical work and reflections upon that work.

Structure of book and case in preview

This first chapter outlines the growing interest in and educational purposes of integrating students' experiences in both academic and practice settings. It proposes that with the increased emphasis on occupational preparation within higher education programs has come a range of demands about graduates being able to move smoothly into practising their profession: being job-ready. Along with such broadly held expectations have come the requirements for providing experiences and practice settings as part of higher education programs. However, the purposes for students undertaking these experiences are not always clear and, in addition, the considerations for and bases by which students come to integrate these experiences remain underdeveloped and, possibly, not widely practised. Then, the purposes, approach and procedures of two recently completed national teaching fellowships focusing on work-integrated learning in Australia are briefly overviewed. In addition, some findings from these fellowships and their implications for curriculum, pedagogy and students personal epistemologies are briefly summarised.

Given the international interest in higher education students having access to practice-based experiences as part of degree programs aiming to develop specific occupational competence, it is necessary to carefully consider the potential educational worth of such experiences, and how and what educational purposes might be realised through them. Therefore, Chapter Two – *Purposes of higher education: Contemporary and perennial emphases* – discusses the potential educational worth of such initiatives. It proposes that it is necessary to define and elaborate a range of key concepts associated with educational

practices and student learning. To advance a consideration of these concepts, this chapter discusses how we might come to view the educational worth of integrating experiences across academic and practice settings as being educationally worthwhile. In doing so, it outlines what might constitute the purposes of engaging in work-based experiences as part of the higher education process and how these different purposes need to be considered in terms of the kinds of experiences for students and their organisation that will be required to achieve them.

Chapter Three - *Educational purposes of integrating experiences in practice and university settings* – outlines a range of specific educational purposes for providing and integrating practice-based experiences in higher education programs. It proposes that these purposes can be categorised as those associated with three educational concerns. These are, firstly, individuals identifying the occupations or specialisations that they will select as their preferred occupations. Secondly is the development of the capacities to be effective in those occupations. Thirdly, is the need to sustain their employability and advancement across lengthening working lives. So, whereas Chapter Two addresses questions about the overall educational purposes of higher education in contemporary times, this chapter addresses the more specific issues of the different kinds of goals and intents able to be addressed through provisions of the integration of practice-based experiences within higher education.

The concept of students' integrating experiences is both slippery and underdeveloped. Three different approaches to considering how this integration might be conceptualised are advanced in Chapter Four – *Conceptions of integrating students' experiences*. These comprise: i) a situated view in which the conception of integration is on the two settings and their particular contributions and how they might be integrated, ii) a personal constructivist view that holds the conception as being much a product of individuals' engagement with phenomena comprising what they experience and how they personally reconcile that, and iii) a socio-personal account that proposes that both personal and situational factors and the relationships between them are central to understanding the process of reconciling and integrating experiences across the two settings. This third view is the one which is taken forward within the account of integrations advanced across this book. Given the array of social factors and processes that it comprises, this conceptualisation of integrations informs of the importance of considering both sets of factors in the organisation, enactment and experiencing of both settings. Hence, approaches to curriculum, pedagogy and the important consideration of students' personal epistemologies arise from these conceptions.

Chapter Five – *Learning and Teaching projects* – outlines the goals, procedures and projects that comprise the two teaching fellowships from which the discussions, data and findings comprising the contents of this book are derived. The first fellowship, which examined the role of learner agency in work-based learning experiences, comprised five projects. Set within the disciplines of nursing, midwifery, physiotherapy and social work across three Australian universities, this project sought to examine ways in which it is possible to promote and utilise the agency of students in construing and integrating their experiences in academic and practice settings. The findings arose from analysis of students' accounts of their practice-based experiences within their university programs. The second fellowship built upon the processes and findings used in the first. Its aim was to identify the curriculum and pedagogic practices which need to be utilised to secure effective integration of experiences across practical and university settings. As noted, this fellowship comprised twenty projects within six Australian universities and across a wide range of disciplines including medicine, journalism, healthcare specialisms, tourism, public relations, chiropractic, engineering, education etc. which all utilised and sought to integrate experiences in practice settings with what students have encountered and learnt within the university setting. This second fellowship was enacted over an eighteen month period and comprised both comparisons of projects within each of the participating universities and the opportunities for the participants to share their experiences with other participants across the twenty projects. Discussions of framing issues and processes for engagement of teachers in considering these experiences are included in this chapter. A key concern for these projects was the need to identify curriculum and pedagogic practices that are of the kind that can be utilised by busy academic staff and that do not require extensive infrastructure to support them. In all, there was a strong focus on the organisation of

experiences and effective instructional interludes that address particular kinds of learning, yet which can be productively enacted by busy academics.

A range of findings arose across both of these fellowships and they are presented, discussed and augmented by instances of data in Chapter Six – *Key findings about integrating experiences*. Essentially, the key findings discussed in this chapter are presented and then considered as a set of premises for organising and integrating students' learning experiences in practice settings. These premises refer to the kinds of purposes that work-integrated learning experiences are expected to address, some of the difficulties of providing experiences and how these might be addressed, as well as considerations for the organisation of experiences and their enactment. In addition, there is consideration of the curriculum and pedagogic practices that might support work-integrated learning and promote the agency of students as active learners. Included in these premises is the importance of understanding the perspectives of, bases of engagement by, and outcomes for, students.

Considerations for curriculum to effectively integrate practice-based experiences are advanced and discussed in Chapter Seven – *Curriculum considerations: The integration of experiences*. The framing here is premised upon three key conceptions of curriculum. That is, i) curriculum is something that is intentionally organised as premised in careful planning (i.e. the intended curriculum), ii) something that is implemented by university teachers, professional practitioners and others in both university and practice settings, and extends to the experiences that can or are provided for students (i.e. the enacted curriculum) and also, and perhaps most importantly, iii) something that students themselves experience and come to engage with different levels of interest, different kinds of intentionalities and focuses. This third conception is referred to as the 'experienced curriculum'. Not surprisingly, the findings and discussions in this chapter are organised and presented under the three headings of the 'intended curriculum', the 'enacted curriculum' and the 'experienced curriculum'. These organising concepts are used to suggest how experiences might be planned for and organised to maximise their educational worth, how these experiences might best be enacted to secure the kinds of purposes for which they are intended, and also the means by which students might come to construe and construct knowledge (i.e. learn) from what they experience in both settings and then in their reconciliation of those experiences. Hence, in this way key curriculum premises, practices and outcomes are presented and discussed. The outcomes here are aimed to inform tertiary and higher educators about how best practice-based experiences can be utilised and integrated into the overall academic curriculum.

In Chapter Eight – *Pedagogic practices supporting the integration of experiences*, as the title suggests, specific attention is given to the pedagogic practices that can be used to enrich students' learning secured through their practice-based experiences and the effective reconciliation (i.e. integration) of those experiences by the students. It is proposed here that there are quite distinct pedagogic practices that can be utilised: i) before students engage in practice settings, ii) during that engagement and iii) after those experiences. It is proposed, firstly, that there are pedagogic practices that are best enacted before students engage in practice settings. These practices are aimed to orientate, generate expectations and develop the capacities for the students to enjoy an effective and educationally worthwhile practice experience. Secondly, it is also proposed that during the practice-based experiences there are a range of resources in which students can engage with to secure rich learning outcomes. Some of these resources and their capacities to use them need to be highlighted for the students and perhaps some assistance provided to enrich those experiences. Thirdly, and of particular importance, are the pedagogic practices that can be used to enrich students' learning from these practice settings and reconciling their experiences in both kinds of settings once they return to the university. Indeed, pedagogic interventions after students return from their practice-based experiences have been demonstrated to be quite powerful in enriching participants' learning through processes of sharing, discussion and elaboration of what students have experienced in those settings. It seems that, with guidance by teachers, even unpleasant and seemingly unhelpful interludes in practice settings can be rendered effective and rich learning experiences if opportunities are provided for reflection upon and a sharing of them. Hence, consideration of pedagogic practices which are easy to implement, can be used in combinations of small or slightly larger groups of students etc become central elements of the kind of pedagogic practices which can promote effective work-integrated learning.

Central to the work-integrated learning approach is that in their practice-based experiences students are not directly supervised by academic staff, who may or may not visit them during their time in the settings. Consequently, in Chapter Nine – *Developing students' personal epistemologies* - attention is given to how higher education students might be assisted to become active and engaging learners and have the understandings about how to maximise their learning in and across the practice and university settings, and its integration with what they already know, and how that reconciliations can be used to extend their knowledge and knowing. In all, it is proposed that there is a need to develop in students a highly active epistemological approach. It is important to note that when students are engaging in practice settings that their actions and learning are those which need to be organised by themselves as active learners. That is, they have a central role in constructing meaning and then reconciling what they learn across both kinds of settings. Here, the concept of agentic learners and the kinds of constraints that they may experience and some means to address these constraints are central elements. Moreover, it is emphasised that as professional practitioners it is necessary that graduates from programs of professional preparation will have capacities to be self-directed in their learning, to be able to monitor their own performance and be reflexive about it and others' practice. From this, they should be able to marshal much of their own ongoing learning and development. Therefore, consideration of developing students' personal epistemologies appears central not only for the short term goals associated with their preparation and in reconciling experiences across both practice and university activities and interactions, but also stands as a key attribute for their capacities and to be active in their ongoing learning as practising professionals.

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