Professional and Practice-based Learning

Stephen Billett

# Integrating Practice-based Experiences into Higher Education

Springer

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Volume 13

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*This book is dedicated to Alison Lee Jackson, whose support, companionship and warmth has sustained the completion of this publication.*

# Series Editors' Introduction

A central focus for this book series is on the learning of the capacities required for effective professional practice, and the role experiences in workplace settings contribute to that development. Consequently, a volume that focuses on both the processes of students' learning professional knowledge and how experiences in practice-based settings and their contributions can be utilised and integrated into that learning is quite central to the scope and ambitions of this series. As such this volume makes a welcome contribution. In the author notes, there has been a considerable increase in the interest in higher education programmes that prepare graduates for specific forms of occupational practice. Once reserved for just a few occupations, such as medicine, legal studies, teaching and more recently other healthcare occupations, the demand now is that not only are increasing numbers of higher education programmes focusing specifically on occupations but that these programmes need to include students having periods of experience in the kinds of settings where those occupations are practised. Yet, these changes set within others, such as the increase in the scale of higher education and broader participation. These make the challenge of providing and utilising experiences in workplace settings demanding and, are in some ways, at odds with preferred approaches to the mass teaching of higher education students.

All this interest and emphasis lead to central questions about how quality higher education experiences that include interludes in practice settings can be best managed. Part of the issues to be addressed is the way in which higher education is conceptualised and delivered and the orthodoxies of how students' learning should progress. However, student placements in workplaces, their organisation and ordering and how those experiences might be augmented become new and important challenges for higher education institutions and those teaching within them. Yet, in addressing these questions, existing and emerging insights from educational and learning theory offer some ways forward, particularly when the focus is placed upon the provision of experiences and their experiencing by students. Indeed, such a consideration of higher education provisions cannot rely upon the projection and transmission of content alone. In particular, a strong focus is placed on students'

processes of learning and how they come to engage with the variety of experiences that comprise their programmes and also how they reconcile their experiences and the learning that arises from them.

Hence, this volume is both timely and welcomed. It draws upon to teaching fellowships that engaged a large number of individuals teaching in higher education, their projects and the particular issues they were seeking to resolve through their participation in these studies. So, in many ways, the contents of this book are particularly well grounded in the contemporary experience of higher education practice, albeit within one country. Drawing upon experiences and outcomes from a total of 25 projects across two major teaching fellowships, it engages with well-understood and accepted educational concepts and then utilises these to advance a view about how higher education students' practice-based experiences might be organised and enacted, and then students experiencing of them might be optimised to achieve the kinds of learning outcomes which those activities are directed towards. To do this, it requires a reconsideration of what constitutes the goals for higher education and how these kinds of goals are manifested when the concerns are about the provision and integration of experiences in practice settings within the students' programmes. Hence, the chapters that discuss these purposes are important in setting up considerations for what is an intentional process: higher education. Moreover, given that the concept of students having experiences and then integrating those experiences into their educational programmes is one characterised by complexity, it is helpful that one chapter seeks to understand and elaborate what constitutes such integrations. Here, the author proposes these as means by which students come to reconcile the particular experiences they have had and direct those towards the intended educational goals. In this way, the focus is very much upon the learners and permits re-engagement with important precepts about individual learning and development.

In addition and importantly for guiding the higher educational project, other chapters outlined the overall findings of these two fellowships and then set out considerations about curriculum, pedagogies and also students' personal epistemologies and how these might be engaged with and developed further. In this way, the book seeks to offer a conceptually founded account that is ultimately shaped by the findings of the 25 projects undertaken across and through a range of disciplines across a number of Australian universities. However, the findings here are not wholly restricted to those projects, institutions or programmes. There are a range of discussions, propositions and sets of practices and principles that will hopefully be helpful in guiding the use of practice-based experiences within higher education far more widely.

Regensburg, Germany — Hans Gruber
Paderborn, Germany — Christian Harteis
Queensland, Australia — Stephen Billett
April 2015

# Preface

Put plainly, this book is about how higher education students' experiences in practice settings (i.e. workplaces) can be most effectively utilised and integrated with those in educational settings to assist these students most effectively learn the kind of occupational capacities they will need to be competent in their selected occupations upon graduation. Experiences in practice settings are now essential for those programmes preparing students for specific occupational outcomes. This book seeks to advise about those experiences and how they might be most effectively utilised and integrated.

## Provision and Integration of Work Experiences

There is a growing trend for higher educational provisions to be more closely aligned with practice-based experiences to secure the kinds of knowledge required for employment in specific occupations. In doing so, these educational provisions are expected to meet national goals of supporting employability and a skilled workforce, workplace requirements for effective employees and also students' personal goals associated with occupational outcomes, including securing and sustaining employment and achieving advancement. These imperatives are usually manifested in higher educational programmes now increasingly being focused on outcomes that are related to students' employability upon graduation, i.e. enjoying a smooth transition to work, being effective in their selected occupation and having the kinds of capacities and interests to sustain that employment and secure advancement in working life. To address these expectations educationally, it is necessary to provide students with experiences through which they can generate the capacities needed to secure employment, be effective within it and also adapt to the changing work requirements and, possibly, new occupations across working lives. In doing so, not only are individuals' needs being addressed but also those of their workplaces, and through being employed productively, those individuals make contributions to national well-being.

Although not always wholly aligned, these three sets of interrelated imperatives have broadly similar emphases. Whilst broadly economic in focus, that is, serving goals of efficiency and effectiveness within paid employment, and developing and sustaining effective occupational capacities, such goals also have social and societal implications. That is, much of these capacities are enacted in providing services which humans either need or want. So beyond personal benefits and enterprise sustainability, these capacities also serve a range of societal and human needs. We want competent nurses, doctors, bakers, engineers, etc. Consequently, the development of these capacities goes beyond the immediate employability of graduates, and sustaining workplace viability, they also can meet the needs of those whom their skills serve. So, these educational goals extend to outcomes that many would agree are broadly worthwhile and socially productive.

Perhaps this has always been the case. That is, what is taught in schools, colleges and universities has long been directly or indirectly focussed on occupational purposes. However, at this time, it seems that realising these purposes has become a greater and urgent imperative in ways that are directing and focusing the provisions of schooling and tertiary education across a range of countries. The provisions are increasingly focussed on specific occupations, and their educational processes and outcomes are directed to those purposes. These imperatives likely arise in countries across the world, particularly those with advanced industrial economies, as they respond to changing requirements for productivity and effective work practices in the face of constant changes to occupations and work requirements and the globalisation of economic activities and the press for greater efficiencies that are impacting both the public and the private sector enterprises. Added to this is the massification of higher education, which is being seen increasingly as being the sector that can fulfil the expectations of securing good, secure and worthwhile employment for its graduates. Consequently, the kinds of direct pressure, expectation and mandates that have long been demanded of vocational education systems in many countries are now being applied to provisions of higher education.

It follows that, across most advanced industrial economies, programmes in higher education institutions are now sometimes viewed as being providers of ‘higher vocational education’. With this change have come expectations that students will come to possess the range and kinds of experiences that can secure them employment. Included here is a growing educational emphasis on providing students with access to and engagement in authentic instances of practice (i.e. workplaces) and consideration for how these experiences and what is learnt from them can be effectively integrated with those provided in the university-based components of their higher education programmes and directed towards the outcomes outlined above. Accordingly, university teachers and higher education institutions across a widening range of disciplines and fields of study are being asked to organise experiences in practice-based settings for their students and also to find ways of integrating students’ experiences and learning in both settings into the overall curriculum of their university courses. The interest in providing these practice-based experiences appears to have arisen, in part, from the realisation that the kinds

of experiences that can be provided in the academy alone will be insufficient for developing the kind and range of capacities students need to realise the goal of moving smoothly into practice upon graduation.

Yet, all of these expectations and requirements are difficult to respond to comprehensively and to fulfil. They are tough educational goals. Indeed, it is difficult to identify a time or circumstance in which the higher education provision has been asked to address these kinds of goals. Consequently, it is certainly necessary to identify and understand the kinds of educational purposes that are now being requested and how these might be achieved through the use of practice-based experiences and how they can best be integrated into the overall sets of student experiences in the university programmes and also in the scope and extent of mass provisions of higher education. Certainly, the achievement of these kinds of goals likely requires a range of changes in (i) understandings about and practices within higher education learning experiences, (ii) the reappraisal of the worth of work settings as circumstances for learning, (iii) the kinds of knowledge that can be learnt and (iv) also the emphasis on learning over teaching. These requirements extend to how students engage in higher education provisions and how teachers offer experiences, universities' provisions and ordering of experiences. Understanding and implementing experiences for their students in both university and practice settings are central to achieving these kinds of purposes.

This book is, in part, a response to all these emerging demands by drawing upon the scholarship of learning and teaching. Specifically, also it draws upon the processes and outcomes of twenty-five teaching and learning projects that were enacted across a total of seven Australian universities undertaken within two teaching and learning fellowships (Billett 2009, 2011). These fellowships sought to identify principles and practices associated with the effective implementation of work-based learning experiences for students across a range of academic areas and how these experiences could be effectively integrated into the students' programmes to achieve the desired kinds of outcomes set out above. A key concern for these fellowships was to identify the worth of these educational purposes and processes for realising the effective integration of these work experiences. A guiding purpose for these fellowships, and the project work they comprised, was to identify sets of curriculum and pedagogic practices that could be enacted by busy university teachers and would not require significant infrastructure and high levels of continuing investment to provide and sustain such experiences.

Yet, and in addition, the particular emphasis on learning in and across these two settings necessarily means that, beyond a consideration of curriculum and pedagogic practices, it is essential to also account for how students need to engage in activities when engaging in practice-based experiences and integrating what they have learnt so that it is directed towards their educational purposes. Hence, a consideration of students' epistemological actions in terms of how they engage in learning in these practice settings and then reconcile and integrate their experiences within higher education programmes became necessary. In short, the case made within and across the contents of this book is essentially directed towards these sets of educational

purposes, processes and outcomes, that is, arguing a case for what constitutes the goals for the integration of these experiences; how best they might be enacted before, during and after students engage in practice settings; for the development of both curriculum and pedagogic practices that can support these kinds of educational activities; and what kind of epistemological practices students need to possess and enact to realise an effective reconciliation of their experiences across the university programmes.

It follows, therefore, that set out across this book are the considerations for the educational worth of these kinds of activities, what they constitute and how best they might be enacted and appraised. Although the practical enquiries which underpin this book took place in one country (i.e. Australia) and its higher education system, it is anticipated that the discussions within it and the proposed approaches will be applicable to higher education audiences across the world. Certainly, the conceptual issues and bases for understanding these learning and teaching processes seem unlikely to be restricted to this country.

Queensland, Australia Stephen Billett
May 2015

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The first of these two fellowships was an Associate Fellowship entitled *Developing agentic professionals through practice-based pedagogies*, which was auspiced by the ALTC after the closure of the Carrick Institute. It comprised five subprojects, and the participants worked effectively individually and collectively to make possible the fellowship activities and outcomes. This included the trialling and evaluating of an approach to academic professional development (i.e. nondirective guidance) and the identification of tentative practices associated with developing students as agentic learners. These participants were Liz Molloy, Jenny Newton, Brian Jolly and Jenny Keating (Monash University), Pauline Glover and Linda Sweet (Flinders University) and Jennifer Cartmel, Jane Thomson, Marie Cook and Marion Mitchell (Griffith University). The three universities that supported the fellowship activities (Monash University, Flinders University and Griffith University) directly contributed to the success of this fellowship. Fourthly, Griffith University's direct support of the activities of the fellowship was instrumental in realising its outcomes. Professor Amanda Henderson (Queensland Health) provided support as an independent evaluator of the fellowship activities.

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# Contents

# Chapter 1
# Integrating Practice-Based Experiences with Higher Education

## 1.1 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.



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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 2009c).

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 and 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 lead 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 et al. 2010; Jolly and 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 et al. 2010; Leinhardt et al. 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 and Solomon 2001), or as providing particular and salient contributions for the development of professional competence (Henderson et al. 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 and 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 experi-

ences 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 and 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.

## 1.2 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 and 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 and 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 and 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 and 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.

## 1.3 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 and 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 et al. 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 and 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 occupa-

tional 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 and Keating 2011), midwifery (Sweet and 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?

### *1.3.1 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 and 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 (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-nineteenth 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 and 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 and 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 and 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.

### *1.3.2 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 were occupational practice is enacted are quite different (Brown et al. 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 the engage

that leads to learning of particular kinds (Rogoff and 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 and 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 and Choy 2014; Boud and 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 and 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 and 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.

### *1.3.3 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 2009c). 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 and 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 and 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 et al. 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.

### *1.3.4 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 and 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 and 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 and 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 and Middleton 1996; Lave and 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 and 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.

### *1.3.5 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 (Chaps. 2 and 3), nature of the integration of learning experiences and how they might be conceptualised and best progressed (Chap. 4). In addition, some pedagogic and curriculum practices for promoting the integration of students' experiences in both academic and practice settings are advanced (Chaps. 7 and 8). 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 Chap. 7 – curriculum considerations are set out, as are those associated with pedagogy and personal epistemology, in Chaps. 8 and 9 respectively.

### *1.3.6 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.

### *1.3.7 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, Chap. 2 – *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 3 – *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 Chap. 2 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 Chap. 4 – *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 5 – *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 20 projects within 6 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 18 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 20 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 Chap. 6 – *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 effective integrate practice-based experiences are advanced and discussed in Chap. 7 – *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 Chap. 8 – *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 Chap. 9 – *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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# Chapter 2
# Purposes of Higher Education: Contemporary and Perennial Emphases

## 2.1 Contemporary Purposes of Higher Education

This chapter discusses the educational worth of providing and integrating practice-based experiences within higher education programs. In attempting to make judgements about its educational worth, it is necessary to consider the purposes of higher education and how these purposes should be evaluated. Of course, attempting to provide an account of the purposes of higher education is worthy of an entire book in its own right, if not books. What is attempted here is an account of both its perennial purposes as a sector of higher education and also how it is or needs to be remade in response to contemporary challenges such as massive student numbers and demands for relevance and pertinence mount, often against external standards and mandates. This chapter, therefore, delineates the changing character of higher education provisions and what constitutes its key purposes in contemporary times. It proposes that much of higher education is now explicitly directed towards the development of specific skills associated with occupations. Certainly, at this time, higher education programs across nations with advanced industrial economies are increasingly focussing on preparing graduates for specific occupations. And, as noted, the worth of these programs is being increasingly judged by governments, students and employers on outcomes directly associated with employability within, and applicability to, particular fields and circumstances of employment (i.e. occupations and workplaces). That is, processes focused on direct employability: i.e. being job-ready. However, in many ways this emphasis represents merely a qualitative change in emphasis on what has always been the case for the vast majority of higher education. Initial occupational preparation has long been the part of the higher educational project, even when presented as liberal education. Indeed, much of the discussion about the liberal versus more occupationally-specific purposes of higher education appears misplaced, erroneous and unhelpful in understanding the kinds of purposes that universities are requested to address in contemporary times. Instead, it is held that the purpose of liberal



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education has often been associated with securing employment in particular kinds of work and advancing the educational advantage for relatively small numbers of the socially advantaged (Bantock 1980). That is, preparing them for forms of occupations which were well served by the kinds of educational content and goals that were enacted through so-called liberal higher education.

However, qualitatively, the emphasis now has become more centred on programs preparing students for specific occupations, and for much larger numbers of students. This occupation-specific focus brings with it heightened expectations that students from these programs will be directly employable upon graduation and enjoy smooth transitions into professional practice (i.e. they will be job ready). Moreover, the more specific the alignment with particular occupations, the easier it is to make judgements and provide commentary on how effectively these programs are securing graduate employment and employer satisfaction. Yet, this is a tough educational goal. Fulfilling this expectation means graduates being competent in the requirements of the particular workplace or work practice in which they secure employment. Therefore, university students increasingly need experiences that develop both occupational capacities and understandings about situational variations of that practice by the time they graduate. It follows, therefore, that there is a growing incidence of higher education institutions providing students with access to and engagement in authentic instances of work settings and of the kind where they will seek employment and come to practice. Yet, more than providing students with experiences in both university and practice settings, there is a need to identify what kinds of learning can best be provided from experiences in each of these settings, how those experiences need to be organised and utilised and then work to integrate the contributions of experiences in both settings. All of these premises now position practice-based experiences as being necessary and, increasingly, legitimate elements of higher education programs.

Consequently, given these qualitative changes, it is important to revisit and reconsider what constitutes both the purposes of higher education and processes for occupationally-specific programs and decide how practice-based experiences can be utilised and integrated. This revisiting includes considering how these purposes are identified and are to be enacted through providing students with experiences in both kinds of settings and then reconciling their learning through the effective integration of these contributions to the development of their occupational capacities. While the detailing of these particular purposes of their integration is addressed in the next chapter, here the worth of these educational purposes and bases for realising their effective integration are discussed.

The case advanced here is that there is a shift in the provision of higher education towards the kinds of programs that focus on two very tough educational goals: occupational preparation and job readiness, which makes new demands and requires fresh considerations of higher education purposes and processes. Making this case necessitates a consideration of: (i) what are the purposes of higher education; (ii) in what ways are there distinctions between provisions that are more or less centred on specific occupational outcomes and (iii) how do occupational-specific programs fit within these purposes and distinctions.

## 2.2 Occupational and Workplace Focus Within Higher Education

As foreshadowed, in recent times there has been a shift in the emphasis in and purposes of university programs in countries with advanced industrial economies. This shift comprises higher education programs increasingly being those whose purposes are directly associated with the preparation of graduates for specific occupations (Lomas 1997; Organisation for Economic Co-operation and Development (OECD) 2010). Consequently, there have been changes in the kinds of courses universities are offering and the focus and purposes of the higher education provision more generally. For instance, in many universities, there has been a decline in the number of students enrolled in humanities programs and the shifting of student load to programs with a more occupational focus, and a greater emphasis on the graduates of those programs are seen as more directly aligned with employable outcomes and able to practice effectively their selected occupation. Inevitably, this kind of change has led to some questioning of the purposes of higher education, and what constitutes the kinds of experiences that can and should be provided to higher education students to realise these goals. For instance, given the particular emphasis on occupational outcomes and readiness of graduates, in many courses there is a provision of experiences in workplaces or practice settings organised to provide opportunities for students to apply and/or practice what they have learnt in the university setting. Moreover, such experiences are now being seen as making particular and essential contributions to students' higher education learning in their own right. That is, these experiences provide learning that cannot realistically be achieved through those in university settings alone. Just as it would be considered inconceivable that anybody wishing to be a doctor, nurse or school teacher could do so without significant interludes of practice-based experiences, increasingly this requirement is being accepted for a much wider set of university programs. For example, students in journalism, applied theatre, business, commerce, and applied health programs are all being provided with experiences in workplace settings. Hence, the inclusion of work placements or practice-based experiences is now occurring more widely and almost universally in some countries (e.g. the co-operative movement in the United States or the foundation degree programs in the United Kingdom), and that these experiences are increasingly the focus of students' assessment and course evaluations. Indeed, some universities' marketing thrust is to emphasise that students in these institutions are provided with experiences outside of those institutions using terms such as 'real-world experience' to emphasise the students' engagement with settings and experiences outside the university's own setting.

Indeed, such is the extent of the change with the profile of higher education programs that some suggest, pejoratively, that universities are now primarily involved in 'higher vocational education'. However, such a claim is erroneous in so far as much of higher education has always been directed towards occupational purposes. Oakeshott (1962) claims that a university education differs from the

vocational education "because it is an education in languages rather than literatures and because it is concerned with the use and management of explanatory language (or modes of thought) and not prescriptive languages" (p. 57). Here, languages are seen as the mechanisms for understanding and achieving particular goals (as in procedures and concepts) whereas being literate refers to being able to use language in particular ways – suggesting a higher level of engagement with this knowledge.

The question here is, whether it is possible to assign such qualities to different sectors of education or whether this comes through rich repertoires of experience. Certainly, as mentioned in the previous chapter, there are concerns associated with higher education being directed towards narrow instrumental and very specific purposes, which is worth far greater consideration. Indeed, the emphasis on developing employable skills has always probably been the case for higher education, although not always acknowledged as such. This shift to having a greater number of more occupationally specific programs, like others before it, has arisen from emerging social and economic imperatives including those associated with meeting the expectations of students, government, employers and industry and/or professional bodies (OECD 2010). However, occupationally-specific purposes and expectations are not wholly new to higher education. Such purposes have been long been exercised across the history of university education. For instance, in Hellenic Greece, university provisions were reserved for the few key professions free born Greek males were able to practice. These included medicine, professor, military leaders (Lodge 1947). So, they were quite occupationally specific. More recently, this occupational focus and the need to provide workplace experiences aligned to those occupations were enacted through the North American co-operative education movement (Grubb and Badway 1998), with its provision of lengthy periods of workplace placements (e.g., internships) built into university programs. As noted, there is also the long-standing practice of having occupational specific courses in the healthcare professions (e.g. medicine, nursing, physiotherapy) also with their clinical placements and efforts to secure effective learning outcomes from these placements within higher education programs (e.g. Boud and Solomon 2001). However, with the massification of higher education and the growth in university programs has come an increase in a whole range of courses to meet specific occupational needs, yet far from all of them include practice-based components. The key concern is how the purposes and processes of higher education can offer worthwhile experiences and outcomes for students.

This worthwhileness is an important consideration. The learning of a particular domain of knowledge associated with an occupation is not qualitatively different than the learning any other domain of knowledge, except when efforts are made to make distinctions about the relative worth of different kinds of knowledge domains (Gelman and Greeno 1989). Consequently, the kinds of knowledge associated with learning a discipline such as philosophy, history, geology, geography is qualitatively the same as that associated with learning domains such as medicine, nursing, teaching, journalism or applied theatre. This extends to work variously described as

trade, semiskilled and even non-skilled. That is, each of these domains has particular forms of knowledge that need to be learnt and their learning and enactment usually requires higher-order capacities, including criticality in their organisation and utilisation (Alexander and Judy 1988). So, the educational purposes of and preparation for any of these domains of activities is not necessarily distinct. Moreover, simple assumptions that these domains are of differential worth (i.e. some are more worthy than others) can be subjective and cultural in their construction and problematic in their exercise. Then, there are suggestions that some forms of knowledge are inherently more broadly adaptable than others. Yet, again, the degree by which knowledge can be of the kind that makes it effective across a range of domains remains problematic, as usually competence within the domain is based at least as much upon domain-specific knowledge as broader capacities such as problem solving, literacy and numeracy etc. Yet, language and literacy are important foundations for underpinning domains of knowledge. Hence, simple objections associated with the particular domains being more or less valuable, legitimate or deserving privilege within higher education are not entertained here.

Instead, the focus is upon the worth of higher educational provisions generating the kinds of capacities required for the effective exercise of that occupational practice, which extends into their immediate applicability to workplace settings. The inclusion of educational purposes in this discussion is central because they influence how higher educational provisions are to be planned, enacted and evaluated. From what was advanced in the previous chapter, quite clearly, contemporaneously, these educational purposes and forms of provision need to focus upon generating within students a domain of knowledge associated with the particular occupational practice with which they are seeking to engage. Moreover, this preparation needs to extend beyond the development of the canonical occupational knowledge (i.e. the kinds of knowledge that all practitioners would be expected to possess and use effectively) and include some understandings of the different ways in which that knowledge is applied across a range of circumstances where the graduates' selected occupation is enacted. That is, situational variations of occupational capacities (Billett 2001a). Noteworthy, such domains of canonical and situated occupational knowledge have conceptual, procedural and dispositional dimensions and hierarchies. The educational goals associated with the development of such domains also necessarily include the development of critical capacities and associated learnings that are not necessarily specific to that domain of knowledge but which are essential for its effective practice. Certainly, there is no interest here in proposing a restricted view of occupational competence, simply because the particular occupation enjoys more or less societal status. Instead, it is assumed that individuals practising an occupation require robust body of domain specific knowledge and associated capacities such as problem solving, literacy, numeracy and dispositions such as interest and criticality (Alexander and Judy 1988).

## 2.3 The Context, Purpose and Practices of Higher Education

Much of what has been proposed above is contested and some, perhaps many, would see claims about the development of specific occupational capacities, let alone those required for particular workplaces, as being antithetical to the goals of higher education. Liberal and essentialist positions on occupational specific education hold that there is a schism between individuals' goals and those that utilise knowledge for social and economic purposes through occupations (Oakeshott 1962). In essence, they contest the idea that a civil society needs to comprise and value those who provide services such as the building of a shelter, the production of food, the manufacturer of requirements for human society, care of the sick, securing adequate supplies of water, and the kinds of occupations which keep the brute fact of nature at bay. In many ways, the case made is quite blunt and highly inconsistently. Yet, whereas the computer programmer is seen as being the antithesis of an educated individual (Bloom 1991) few, if any of such, commentators make similar claims against medical practitioners. However, such cultural blindness ignores contractions and exceptions. Elias (1995) notes, for instance, that although the worth of the classic tradition of liberal education has endured in Western societies, there has always been a dimension of education for work in this tradition.

> ... while the mediaeval universities were places where the classical education for leisure was dominant, these universities were actually organised for the practical purposes of preparing clergy, teachers, lawyers and physicians for society. Though this education had a few practical components, its purpose was certainly vocational and the materials used more on the practice of medicine and law. (p. 168)

Yet, even this claim may deny the essential occupational focus of university education in the ancient world. In Hellenic Greece, for instance, it was largely elite occupations that were the focus of higher education. The key professions acknowledged in Plato's *Dialogues* are the: (i) medical profession; (ii) legal profession; (iii) professor's profession; (iv) theological profession and (v) military profession (Pangle 1980). All of these occupations relate to paid employment and emphasise many of those that are elite and remain so in current times. The military was obviously important in Hellenic times, although this as a profession is not reported in many contemporary accounts. Returning to more modern times, with the rise of industrialism, universities in England and the United States began to prepare the middle class for the new professions arising in industrialised societies, augmenting the older professions of clergy, law and medicine which still received aspects of classical education. In many ways, universities established in the era of modernity and industrialisation direct their efforts towards occupations which were emerging as key in those eras. Hence, as discussed below, many of the new universities in the United Kingdom and Europe were established to offer preparation for a range of occupations that were different than those being prepared through ancient universities (Roodhouse 2007).

Moreover, and as Elias (1995) reminds, the idealism of liberal perspectives tends to deny the very bases upon which the societies that they value are premised and

are often unrealistic in proclaiming, particularly individual goals of education at the expense of its social goals. Drawing upon considerations of Hellenic Greece, he states, we must never forget that the origins of Liberal education lie in societies where this education was made possible because of the existence and efforts of a labouring class and that "This education has prevailed in countries in which there exists a great distinction between those who rule and those who are ruled" (Elias 1995, p. 36). Perhaps there can be no greater example than the slave society that comprised Hellenic Greece, where the work of artisans was essential to its existence and progression, and that of artists to the quality of life, yet both of these were deemed to be of low standing by the likes of Plato and Socrates (Lodge 1947). Yet, such arguments may be obscured because a claim of philosophers proposing essentialist liberal and progressive perspectives is that they know what is best for education and for the education of others. Hence, labels associated with narrowness, pragmatic, concrete and limiting development arise from such perspectives. However, contemporary understandings about the nature of skilled work suggest that it is far from reproductive and requires judgement, higher-order capacities and profound knowledge of a specific occupational domain and its situated application (Billett 2006c).

In explaining the perpetuation of the higher standing of non-vocational or liberal education over vocational education, Sanderson (1993) offers five rationales. Firstly, three main traditions – classics, mathematics and philosophy – were well established in key universities. They were privileged not for the utility of their content, but their alleged capacity to train minds to apply to any particular task or domain, which is in its own terms a utilitarian outcome. There were clear delineations between practical and tangible knowledge and that which was self-justifying – an end in itself (p. 189). He notes that a cultivated mind had no need to justify itself through tangible products. In some sense, it was an education of the free men who were financially independent and, therefore, did not need to use it to earn a living – that is, an education for those with high social status and independent means. Sanderson (1993) notes that instrumental knowledge "... were inferior and were to be studied later – in the Inns of Court, hospitals, bankers' parlours or the offices of the civil engineer or estate manager." (p. 189), thereby, not only privileging particular kinds of knowledge, but also where that knowledge could best be learnt. Secondly, this kind of liberal education was inexpensive. It did not require costly laboratories and resources to assist technical and practical learning. "The defence of cheap and useless liberal education was thus bound up with the best interests of college fellows in the defence of their financial and autonomous power status." (p. 190). Aligned with this, and thirdly, liberal education conveyed a dignity of mystery which set those with it apart from those without it. Fourthly, a liberal education can be supported by key institutional support. Many graduates from Oxford and Cambridge became members of the clergy, others also gained positions with the civil service and the Home Office, which meant that many individuals in key institutions in Britain will be up holding to this form of education, and the prestige it afforded them. Fifthly, Sanderson (1993) proposed that there is an enduring belief that a mind trained through engagement with abstract liberal disciplines was that most

able to be flexibly applied to other subject areas. The fact that graduates from key liberal universities were able to be successful across a range of fields and disciplines, was held to support this proposition regardless of its voracity. However, what is known from studies of expert performance is that domain specificity of knowledge is an essential component to such performance which cannot be secured by general capacities alone (Chi et al. 1982; Ericsson and Smith 1991).

One outcome of these kinds of perspective, which in the West was at least promoted, if not fostered, through the sentiments of Hellenic Greece, has been to generate dualisms between mind and body; theory and practice, knowing and doing; ethical and unethical activities, between liberal and vocational education (Bantock 1980; Elias 1995; Higgins 2005). That is, the generation of a taxonomy which seeks to delineate and separate different kinds of human knowledge and knowing, but privileges mind, theory and ethics over body, practice and doing.

Yet, such perspectives and dualisms tend to deny the dualities comprising how individuals come to know and engage in higher education (i.e. the requirement for domain specificity in knowledge as well as that which can transcend specific domains), the inherent associations and pathways between conceptual (i.e. theoretical) and procedural (i.e. at which informs practice) knowledge. In doing so, they also ignore the difference between what is proposed for education (i.e. intended processes and outcomes) and what people participating in education programs experience. Ultimately, a provision of education is only ever something provided, regardless of whether its intentions are fundamental, essentialist, liberal or vocational. Beyond what is provided is what those who engage with and participate in that educational provision make of it (Billett 2006b). So, rather than dualisms (i.e. concepts which cannot be interlinked) the provision of higher educational is shaped by dualities (i.e. sets of interrelated concepts and practices) not the least because there are different perspectives, perceptions and bases for those who engage in higher education: i.e. students' perspectives, subjectivities, interests and intentionalities.

However, at least part of this preference appears to be a social, if not cultural, sentiment. The privileging of a liberal higher education was far from universally adopted across nation states. In France, the *grande ecoles – Ponts et Causees* (1715) *Ecole Polytehnique* (1794) and *Ecole Centrale* (1828) were high-status institutions whose graduates became the majority of the business technical elite between 1830 and 1930 (Sanderson 1993). In Germany, the Technische Hochschulen (now Universitaten) enjoyed high status including the awarding of a doctor of engineering. Other countries have had and now have highly prestigious technical institutions that are on par with high status Liberal universities (MIT in the USA, ETH in Zurich). The origins of the prestige of these technical institutions were their connections with imperatives such as military purposes and technical skills required for recent processes of industrialisation: important societal imperatives, as was the case in Hellenic Greece. Indeed, Sanderson (1993) states that both France and Prussia suffered military defeats, unlike Britain, and as Watson (2010) notes of Prussia, were not able to compete with Britain in the first industrial revolution, which stimulated a high level of awareness in both of those countries about and need for

improvements in technology and technical skills. Indeed, it is claimed that much of the success in subsequent phases of industrial revolutions and industrialisation generally was a product of strong technical education at both the German vocational and higher education levels (Watson 2010). Certainly, there was far less demarcation between higher education and other institutions premised upon the development of occupations that were dependent upon either manual or non-manual capacities in the Germanic tradition. The German trade schools, it is claimed, were developed in the 1820s and 1830s to perpetuate high standards of hand crafts. However, the same schools that served the crafts then "also served the more advanced engineering industries as they arose, the French motor car industry for example" (p. 192). On a different basis, but around the same time, in the United States of America, there was a shortage of skilled labour because of immigrants largely being unskilled. This skill shortage was addressed by mechanisation, machine tool and mass production: demarcation and industry production. However, the technologies required for this form of production led to the elevation of the occupational status of mechanics and engineers and, correspondingly, technical education. So, the simple social fact is that unlike Prussia (i.e. what was to become Germany), France or the United States, the United Kingdom had not faced these particular challenges, and the distinctions between general and more applied forms of education were able to be more easily exercised. Only later, when significant economic and security threats emerged for the United Kingdom, was there established a set of new universities intended to support occupational skill development in ways which were not seen as achievable in its ancient universities. Hence, a new set of universities was founded to achieve these kinds of purposes, many of which now would be taken as being quite elite (e.g. University of London). For instance, the nineteenth century German universities and the French ecoles d'industrie were administered by ministries of commerce or trade. Initially, in Britain, institutes of higher learning – university colleges – offering technical courses, came under the control of the Department of Trade and Industry, and were often located in the north of England and derided by liberal universities based in southern England (Sanderson 1993).

So, a key point made here is that the purposes of higher education are not uniform or fixed. Neither do their traditions necessarily nor inherently favour non-occupationally focussed or liberal orientation to this education. It seems the degree by which educational purposes of universities are shaped is linked to particular national circumstances, including points of national development, imperatives and prior historical experiences. However, it is possible to argue that either directly or indirectly the vast majority of higher education provisions have focused on occupational outcomes for students and the degree by which this emphasis is evident in the specific focuses of courses (i.e. their aims and goals) are shaped by national factors. So broadly speaking, what constitutes the purposes of higher education are shaped by both enduring conceptions of higher education's role and national contexts in which it is enacted. Hence, how an occupational or work-related emphasis is identified within those purposes is linked to the nation's circumstances. So, what constitutes educational purposes peace needs be understood through an understanding of national circumstances.

## 2.4 National Context and the Purposes of Higher Education

From the above, it is proposed that the form and purposes of higher education are not inherently given, nor are they legitimised through a focus on liberal education. Instead, they appear to be shaped by contextual factors that can be global, national, regional or situational, although a likely manifested within a particular country at a particular point in time. Pring (1995) refers to the range of factors that shape educational policy as: (i) political; (ii) economic; (iii) social/cultural and (iv) personal. These premises seem a good way to understand how these purposes are defined within particular nation states. Each of these four factors is addressed in turn below to make this point.

### *2.4.1 Political Factors*

Political factors refer to "all those pressures, either from government or upon government, to develop policy in a particular way" (Pring 1995, p. 6). Quite likely, those pressures reflect political and economic factors which may be tangible or responses to a real or perceived threat. The degree by which there is government interest and the extent of the threat may well shape the level of direct government involvement in education, including its interventions in mandating its purposes and outcomes. This intervention can extend broadly and into the focuses of education that are permitted, what is privileged and resourced and how the governance of educational institutions is enacted. As foreshadowed in Chap. 1 (i.e. Integrating practice-based experiences with higher education) and can be seen above, the establishment and trajectory of higher education institutions in many European countries were shaped by the formation of modern nation states, the demands of industrialisation and modernity. These led to distinct kinds of institutions and emphases depending upon each of those nation states' histories, as noted above. So, whereas Britain was at the vanguard of the first phase of industrialisation, which had limited technological impacts and consequences, later on, it found itself fallen behind the advances made by European countries who were responding to being marginalised by the first round of the industrial revolution (Deissinger 2000; Troger 2002). Hence, a number of European countries centred their higher education institutions on engineering and technical disciplines as these became key national imperatives, whilst British higher education continued with its more or less applied focus. That focus was subsequently transformed by later reforms as the consequences of a lack of technical innovation and capacity became clear in the second phase of industrialisation.

Nevertheless, what was enacted in Britain in terms of higher education reforms was quite different from practices exercised in France, for instance. In that country, an outcome of the social revolution that had overthrown the ancient regime led to an emphasis on access premised on merit, which extended to access to prestigious

universes (Remery and Merele 2014). So, its institutions, practices and students were potentially quite different from those in British universities. It has been claimed, for instance, that much of the activities in the modern universities in Britain were reserved for the children of the wealthy middle class, who wanted to ensure their children have access to good clean work and the new occupations and professions arising from industrialisation (Sanderson 1993). Of course, as with industrialisation and the formation of modern nation states, such developments are not wholly a product of each nation. Instead, there were supranational movements and imperatives which brought about these changes in each of these countries, albeit in slightly different manifestations, and sometimes a reaction to what had occurred elsewhere.

Certainly, in contemporary time and contexts, many countries are engaged in initiatives associated with reforming higher education provisions that position nation states to be effective in securing the kinds of goals required to be competitive in an increasingly globalised economy. So, whether those provisions are about assisting nations being export-oriented in their goods and services, or being able to resist imports, similar concerns are being exercised, but from very distinct bases. Indeed, whether it is about the efficacy of public service provisions, such as health care, that seek to utilise effectively national resources, or the development of occupations that are central to contemporary economic performance, there are common practices being enacted across most countries with advanced industrial economies. For countries without such economies, there are efforts to develop the kinds of capacities which will assist those nations engage in such globally economic activity. Indeed, funding support from global agencies for such countries are often directed towards the achievement of these kinds of goals. Certainly, a long-standing goal of state-funded education is to ensure that citizens are both employable and gainfully employed, and this has led to an interest in educational outcomes that lead to employment (Gonon 2009a, b). However, these goals have been accentuated in recent times and have seen a shift in emphasis towards programs that are more directly aligned with specific employment outcomes. As noted, this has resulted in not only governments wanting to give priorities to areas of study that are aligned to employment outcomes. A particular example of this was the move in the United Kingdom to remove the funding for the adult education programs operated by universities which provided non-credentialed education for adults, often for purposes of cultural betterment. These were seen as being outside of the ambit of university education and not well aligned with economic and occupationally oriented programs. This example also exercises another instance of change in the global discourse that occurred as a result of the OECD year of lifelong learning in 1996. It was declared that as part of the charter of that year that, rather than lifelong learning being about cultural betterment, it needed to be aligned with personal economic goals. Subsequent initiatives have seen national programs of lifelong learning focused on such outcomes. For instance, in Denmark there is a great deal of emphasis on achieving innovation at and for work through lifelong education provisions, and innovation is a feature of all levels of education.

However, one of the features of a strong political engagement with education is the imposition of frameworks which seek to secure accountability of different kinds from educational institutions, those who organise what should be taught and learnt and those who are making judgements about students' competence (i.e. teachers). So, a heightened set of political concerns often leads to the imposition of particular kinds of demands upon higher educational institutions. These can come in the form of mandated requirements for courses, external advice and standards in terms of what would be taught and the requirements for occupational assessment. They can also extend to other imperatives such as those focused on reducing student withdrawal from programs. In all, in times of economic and social distress, it is most likely that external mandations and regulations will be applied to higher education. Without doubt, the current era is one of those for many nations and their higher education systems.

### *2.4.2 Economic Factors*

Economic factors here include the degree of connectedness between educational provisions and what the economy and society wants (Pring 1995, p. 10). In this way, it coincides with much of the political imperatives referred to above. That is, these factors include responding to changing patterns of employment, securing the different kinds and levels of skill, and responding to criticisms of prevailing values and attitudes that are seen to be against national economic interests. So, for instance, a common refrain in critiques of educational provisions that support the development of workplace skills is the need for greater versatility in those provisions and ensuring that what is learnt is appropriate and pertinent to those who want to employ, and overcoming structural problems such as a lack of skilled workers at particular points in economic cycles. Much of these concerns are those exercised by employers, industry or professional groups who want strong alignments between educational provisions and their needs to operate viable and responsive enterprises (Department of Education Science and Training 2002; Department of Innovation Universities and Skills 2008; Universities Australia 2008). Hence, what is often proposed as being appropriate by such bodies is the development of knowledge that is immediately applicable and can contribute to enterprises' activities and also address strategic concerns about their present or future needs. In these ways, the focus for higher education programs, like vocational education, is for students to develop occupational specific capacities and be job-ready on graduation so that employers do not need to allocate significant resources to make them productive (Billett 2011). So, beyond the development of occupational capacities there are imperatives associated with those capacities being exercised in particular ways as required by industry groups, enterprises or professional bodies. These particular means can relate to the orientation of the workplace or particular requirements within it. All of this adds a range of dimensions to the requirements to be 'job ready'. For instance, organisations with a service orientation may well want employees to

demonstrate particular service qualities that go beyond what might normally be expected of somebody practising their occupation. Many workplaces now want employees who can work inter-professionally, or in teams. So, whereas liberal views about higher education as comprising a general preparation for life and the development of specific capacities occurring in the workplace (see above), in contemporary times, employers and employing organisations have expectations that such capacities will be learnt within educational programs.

Hence, a great deal of the focus for purposes of higher education is now on individual employability and responding to the demands of high-skill economies and needs for particular kinds of high-skilled workers. Consequently, there is greater connectivity between educational provisions and economic needs – greater levels of skill development required. Policies which make explicit reference to the personal benefits arising to individuals from higher education have been used to organise the funding arrangements of University education provisions. So, arrangements in countries such as Australia and United Kingdom where students make a financial contribution to their education means that there is a different kind of personal engagement and imperatives associated with higher education than when it is provided free of charge by the state, which remains the case in other countries. Then, there are factors associated with countries seeking to enhance their economic standing by educating its young people in other countries' universities. Here, expenditure on education is increasingly seen as being an investment, where returns of particular kinds might be sought. So, there is a raft of economic factors that shape the organisation and participation in higher education programs.

### *2.4.3* Social/Cultural *Factors*

Social and cultural factors are those that represent or work towards particular goals that are urgent for society (Pring 1995 p. 13), as discussed above. These are shaped by imperatives that can be both national and/or supranational. For instance, the standing of occupations on the basis of their preparation is not uniform across nation states. Whilst preparation for the major professions (i.e. law, medicine, accountancy) is usually unquestionably through higher education institutions, there is less consistency with other occupations. For instance, while the occupation of nursing is seen as being a para-profession or profession in many countries and worthy of a higher education development (e.g. in United States, United Kingdom and Australia), in other countries it is seen as being sub professional and nurses are prepared for that work either in hospitals or in lower tier tertiary education institutions (e.g. in Germany). Then, within occupations there are often categories of work that are often country dependent. Lodge (1947) notes that within the professions there are often levels of practitioners, "one a matter of experience and close attention to facts, the other a matter of insight and reasoning which arises from the interpretation of facts" (p. 41). For instance, within the medical profession there are doctors' assistants and physicians proper. Then, there are occupations such

as nurse practitioners which are permitted in some countries but not in others. Hence, the particular categories of distinctions amongst occupations can differ across countries.

There are also different kinds of demands that arise from cultural mores and practices. So, for instance, as students in some countries have to pay for their higher education or accrue a debt associated with it, there is a great emphasis on repaying back that debt or finding ways to pay off higher education fees. Perhaps inevitably, such practices lead to a greater focus on immediate employable outcomes from higher education provisions. There can also be social policies within countries to enhance access by particular groups of individuals, based on race or gender or abilities. Concerns about underrepresentation of groups and individuals, in particular social or economic roles, can lead to policies for inclusion and those seeking to discriminate or ameliorate earlier policies and practices. Consequently, there may be a requirement for particular kinds of students to be admitted into programs and for overcoming barriers associated with their participation. These can be associated with providing pathways into higher education, ease of provision within them in terms of kinds of support that are available and measures to reduce attrition or else rearrangement of infrastructure to permit, for instance, students with particular disabilities, to engage. Then, there can be broader issues of access, of making courses available in ways which do not require or necessitate physical attendance on a university campus. The emphasis on these purposes and how they are enacted within higher education policy and practice will vary from country to country and situation to situation. These provisions can extend to arrangements such as advanced standing or credit in the courses being organised through the recognition of prior learning for adults who have not had their learning certified and recognised through educational programs, particularly as a result of disrupted educational experiences. This imperative then leads to purposes associated with inclusion and engagement amongst other kinds of concerns and, at particular points in time, may come to emphasise particular groups of individuals (e.g. returning servicemen and women) (Dymock and Billett 2010; Gonon 2009b; Grubb 1996). Added to this are the different kinds and levels of higher education institutions which exist across many countries. So, for instance, not all countries have a unified higher education system. Some have a bicameral system with applied universities and research universities, such as in the Netherlands, or the polytechnics and universities of New Zealand. There are distinct goals for these different kinds of institutions and the focus of their courses and outcomes reflect that. Hence, they might have quite distinct educational purposes and focuses. Sitting in here somewhere also is a view, such as Barnett's (2004) that higher education can only occur in universities. Hence, these other kinds of higher education institutions are somehow not legitimate and their programs are not worthy of being considered as providing higher education.

Hence, there is a range of cultural and societal factors which will shape what constitutes higher education and importantly the worth that is found within it. Of particular relevance, and perhaps in contrast, is how those who study in higher education come to see its purposes and the ways it shapes their engagement and participation.

### 2.4.4 Personal Factors

Personal factors comprise what students need from education (Pring 1995 p. 15). These needs are probably becoming more complex and focused in many societies with advanced industrial economies. Along with growing and sometimes unreasonable expectations that higher education programs will lead to a lifetime of quality employment, there are also changing expectations about the ways in which students will participate in higher education. In circumstances were students make both material as well as time investments in their higher education, the relationship with universities and teachers might take new forms. With the rise of individualism, personal investment in their education and changing societal and economic expectations it is unlikely that these factors will remain the same or be the same. Quicke (1999) suggests that there have been changes in what constitutes the self in modernity – less dependent upon acceptance of societal mores and more on individual subjectivity. An expression of this sense of self is the level and kinds of occupation in which individuals can engage. With a break from societal structures inhibiting individuals engaging in well-paid and highly esteemed occupations, there is perhaps a greater inclination by contemporary students to secure this kind of work. However, investing one's sense of self in work is seen by some as being not a worthwhile ambition. This is particular case when the work is not held to be worthwhile. For instance, Bauman (2000) emphatically questions whether an occupation can be a life project or whole of life strategy (p. 34). He claims that most work is meaningless and degrading and that:

> ... work as a meaning of life, work as the core axis of everything that counts, is a source of pride, self-esteem, honour and difference or notoriety, in short, work as a vocation has become the privilege of a few; a distinctive mark of the elite. (p. 34)

However, such a view might well be placed within a narrow conception of worthwhile work, linked to that which is seen as being worthwhile by societal elites, such as university professors. What it denies is the importance of what work means to individuals: vocations. For instance, liberal education and liberal arts courses seem no longer the first priority for children from socially advantaged families who want to get ahead and stay ahead. So, the more general point about individualisation is probably well made. For instance, with the advent of mass higher education, and greater percentages of young people participating in it, the expectations of securing well-paid and worthwhile work are inevitably increasing, and these may not always be matched with what is available in labour markets. Hence, the kinds of programs that universities offer may well be increasingly subject to the demands of students. For instance, with the fee-paying programs, those that are not identified with particular occupational outcomes may well struggle to attract sufficient students. At the same time, those aligned with specific occupational outcomes that are well-remunerated may well be the subject of intense competition to secure places and not all applicants' capacities or interests are necessarily aligned with such occupations. Hence, personal ambitions and suitability to particular occupations may not be well aligned. It follows, therefore, that for some programs (e.g. medicine) particular

kinds of selection procedures have been enacted to assist the selection of students whose capacities are most aligned to the requirements of that work. These often go beyond simple academic success and are aligned with other kinds of measures. So, increasingly some students are required to undertake profiling assessments to determine their suitability for engagement in particular kinds of courses.

All of this suggests that there is a complex set of factors such as those that Pring (1995) proposes shapes policies for and purposes of higher education in different areas and different countries. However, it would be wrong to assume that higher education which has a focus on occupations should be seen as being something less worthwhile or secondary to that which focuses on liberal or non-vocational education. When consideration is given to what occurred in highly esteemed institutes of higher education in other countries, and the contradictory nature of what is proposed as a non-occupational-focused higher education, such presumptions can be put to one side (Bantock 1980). Instead, what has been proposed here is that there are sets of factors shaping the context for, the particular purposes of, and orientation of, higher education. At one level, these conceptions are founded within particular nation states. Yet, at another level, and perhaps increasingly, supranational factors have come to shape such purposes. Regardless of whether these are economic and social sentiments, or the uniform practices of regional national alignments, such as the European Union, these purposes and their worth are shaped by contemporaneous and localised factors not cultural platforms from just one country and one epoch.

Therefore, having made the point that there are a range of factors which shape what constitutes worthwhile higher education and the distinct purposes to which it should be directed, and that many of these are negotiated at the national level, it is worth returning to broader conceptions of the purposes of an occupationally-focused higher education system in contemporary times.

## 2.5 Shaping the Worth of Higher Education in Contemporary Times

As noted, there are growing expectations that higher education programs, regardless of the specificity of their occupational focus, should lead to employable outcomes. As noted above, this is more of a quantitative change than a qualitative one, because there has always been an employment focus for most of higher education. This change has led to some reordering within higher education. That is, a growth in the interest in occupationally-specific programs, and a move away from or closure of programs that are not perceived as being associated with employable outcomes. For instance, as mentioned earlier in this chapter, in the United Kingdom, there was a long tradition of adult education programs that were not aligned to employable outcomes. However, changes in funding guidelines saw those programs disappear from the higher education provisions very abruptly. Consequently, higher education programs whose purposes and practices are tailored and directed to

develop occupational specific capacities are more growing as are expectations that graduates from such programs will enjoy smooth transitions from their university studies into professional practice (Department of Innovation Universities and Skills 2008). Upon graduation, therefore, students are now expected to have the capacities to engage immediately and effectively in the work settings in which they secure employment (i.e. job-ready). This kind of expectation is difficult to fulfil, as noted. The requirements for occupational performance, whilst having many common elements, also have specific situational requirements. So, whereas it might be possible to be aware of and attempt to develop the common elements (i.e. the canonical knowledge of the occupation), the particular requirements of the circumstances in which graduates will find employment are likely to be unknown to those who teach and higher education and also those who are students. Consequently, the expectation that because graduates have completed all of the course work requirements that they will somehow be able to be immediately competent (i.e. job ready) in a work situation which is unknown to them or their teachers and will have specific requirements is profoundly unrealistic. Yet, it is in these very circumstances where the quality of the higher education provision will likely be judged. Students may well judge the effectiveness of the preparation in the way in which it prepares them for their first employment upon graduation. Employers similarly will make judgements about new employees' readiness to be effective in their workplace and meet the often quite situationally-specific work requirements for which they have been employed. Similarly, community members (i.e. clients, patients or family members) will likely arrive at judgements on similar grounds. Consequently, these heightened expectations, whilst premised upon unrealistic precepts, are likely to be the means by which the particular higher education provision, its teachers and its educational processes will come to be judged.

However, beyond these difficult challenges, some within higher education have other reservations. Many, view changes towards a specific focus on occupational preparation and, even more so, when focusing on developing the capacities to meet the requirements of specific work situations, as being educationally problematic and constituting the antithesis of what should comprise a good higher education (Oakeshott 1962). Much of this concern is associated with the perceived limitations on educational provisions that are highly specific and emphasise narrow pertinence (i.e. specific occupation) over broad application (i.e. applicability to a range of occupations and changing work circumstances). So, for these educators, there are also concerns that the imperatives of particular instances of practice (e.g., workplaces) will be privileged over other educational purposes, specifically those often associated with broader educational outcomes, such as critical inquiry and moves to bring about change. There is reasonable justification for these kinds of concerns and, for instance, that higher education is becoming more about social reproduction. In some ways, building from what was argued above; this has perhaps largely always been the case. That is, to reproduce existing classes, biases and privilege through education.

Moreover, and given that the requirements for occupational practices constantly change, albeit more rapidly for some than others, and that these requirements differ

across workplaces, there is an educational argument for focusing on the development of graduate capacities that assist the broad applicability of what they have learnt, rather than its application to particular circumstances. Educators might well raise concerns about narrow and short term outcomes of occupationally-specific programs, but are alone when they are prompted to meet particular workplace requirements (i.e. those where graduates will find employment). Such concerns become heightened when professional bodies generate occupational standards that are held to be prescriptive for both organising educational programs and as benchmarks for graduates to meet the requirements of the profession and to be admitted within them. Certainly, this role has been enacted by professional bodies in a number of occupational fields for a long time (medicine, accountancy, law). Yet, they are now being widely facilitated by governments and professional bodies and often quite specifically, as a means to organise higher education provisions to more directly meet the needs of and be responsive to the particular occupational field. The governmental rhetoric here is about generating a demand-side responsive higher education provision, rather than one premised upon supply-side considerations (i.e. what teachers in higher education want to teach). That is, the aim to ensure that these programs, which are either directly or partially publicly-funded are well aligned with the goals and requirements of the occupations that they are serving and, thereby, meet the needs of those who employ within those occupations, those who require the services of that occupation and those who are seeking to work within them. All of these requests are reasonable and worthy, and justifiable, from these perspectives. However, given the importance of their positioning in all of this, the quality, comprehensiveness and validity of such professional standards become paramount. Yet, often these standards and measures used to enact them are quite narrow, prescriptive and fail to do justice to the requirements for occupational practice (Billett 2011). That is, they often focus on aspects of human behaviour and performance which are measurable, and put to one side those which are often the most important, yet not easily captured through management. Indeed, fundamentally, many in the higher education sector might well propose that the long-standing purposes of university education includes developing broadly adaptable knowledge and critical stances in graduates, rather than meeting particular sets of social and economic goals. These are important reservations and need to be taken seriously, because educational provisions that are focused on presentist outcomes and situational pertinence may be of very limited utility to both students and also society in the longer term. This includes also the workplaces who want their immediate needs addressed, and yet may not be best informed to comment on educational programs.

However, these different emphases (i.e. the development of occupationally specific knowledge and critical and reflective capacities) are not necessarily as inconsistent or irreconcilable as they may first appear. Paid work and, particularly that practised by the professions, requires the constant adaptation of knowledge and criticality in practice because its requirements are distinct and subject to constant change (Billett 2006c). That is, to meet these occupationally-specific purposes requires graduates to have adaptable capacities and critical insights. So, these two

sets of educational purposes are quite complimentary, rather than oppositional. Indeed, the capacities for most forms of professional work prepared for within university programs require more than just technical occupational knowledge or ways of knowing (e.g., Artistole's concept of techne or applied science) (Stevenson 1994). Instead, procedural abilities (i.e. techne), are premised upon the possession of conceptual and dispositional knowledge associated with the occupational specific domains of knowledge (e.g. occupations) and also capacities to be reflexive and critical in its utilisation in particular circumstances and in addressing specific kinds of occupational problems, and the further development of this knowledge by the practitioner. So these kinds of capacities required for effective occupational practice, and the situational manifestation in which practices occur, are reliant upon procedural, conceptual and dispositional forms of knowledge that comprise both occupationally-specific and more executive or strategic elements.

However, on the other hand, there is an enduring fallacy, often rehearsed within higher education, and still fashionable with government, that somehow generalised thinking processes (e.g. generic problem-solving heuristics) and criticality can exist as dis-embedded from a domain of knowledge, and generic abilities can be applied willy-nilly to any situation or occupation regardless of circumstance. However, the findings from three decades of research on expertise within cognitive science (Barsalou 2009; Greeno 1989; Sweller 1990) and within socio-cultural conceptions of knowledge (Billett 1998, 2001a; Brown et al. 1989; Lave and Wenger 1991) suggest that domain-specific and situational understandings are necessary for the useful application of such processes, as well as the strategic capacities that are applicable across a range of domains of knowledge. In essence, general problem-solving capacities may not be helpful unless there is a body (i.e. domain) of knowledge for them to act upon. Yet, conversely, there was a requirement for performance that goes beyond the possession of occupational-specific knowledge alone for effective workplace performance, including the capacity to respond to novel challenges and requirements, as in being able to resolve problems and progress ideas.

Consequently, the development of a well-established and founded personal domain of a body of knowledge (e.g. occupational) is required to exercise the kind of adaptability and criticality that is seen as being what constitutes a worthwhile university education. That is, for the development of critically aware and adaptive graduates there is a need for profound understanding, established procedures and appropriate dispositions associated with the occupation, as well as a broader set of facilities which underpin their effective use and further development. Moreover, the possession of a specific domain of knowledge (e.g. an occupation), does not mean that individuals have structured or will utilise that knowledge in either a uniform or unitary way. Instead, individuals likely construct that domain of knowledge in person-dependent ways and engage with it for purposes and with intent which have strong personal emphases within a framework of socially-shaped expectations, norms and practices (Billett 2009). So, despite having access to the canonical occupational knowledge and experiences which exposes learners to the particular situational requirements of a particular instance of that occupation in a work setting,

does not mean that individuals will construct their knowledge uniformly or in ways which are consistent with the standard textbook or a particular set of practices. Instead, students' construction, organisation and enactment of that knowledge will likely represent a personally-mediated version of these canons and of those requirements. So, this learning, despite it being shaped by societal norms, practices and forms, is inevitably a process based upon human construal and construction. Even strong advocates for the social shaping of knowledge rarely suggest that such shaping proceeds in uniform ways with learners (Berger and Luckman 1967).

Nevertheless, this does not imply highly idiosyncratic and 'anything goes' kinds of individual constructivism. Instead, students' knowledge arises as versions of what they have experienced, and then construed and constructed from that experience. It follows, there are educationally important and urgent issues associated with understanding, identifying, and utilising the educational worth of what should constitute the goals for a higher education provision focusing on the development of specific occupational capacities and being able to be applied within particular circumstances of practice (i.e. job readiness). That is, developing the canonical foundations of the occupation, promoting adaptability in terms of variations of those practice, and criticality associated with informed appraisals of their flexibility and intentional efforts to develop and sustain the capacities required for the occupational practice (Billett 2001a). All of this goes beyond uncritically learning occupational knowledge as a fixed entity. Instead, it emphasises the importance of adapting that knowledge to particular circumstances, which is then essential for responding to emerging requirements. Underpinning the effort and intentionality associated with learning this knowledge richly, and then maintaining and further developing that knowledge, is the importance of individuals' association with that knowledge and commitment to exercise effortful activities in its initial learning and ongoing development. Not the least of these is how best to engage instances of authentic practice experiences and identify how the learning that arises through these experiences can be effectively integrated in the overall experiences that comprise university courses focused on developing occupational capacities (Cooper et al. 2010).

## 2.6 Higher Education and Practice-Based Learning Experiences

It follows from the above that a key issue for higher education provisions is how students can secure both the development of domain specific knowledge, and adapt it to other situations and circumstances, including their first and subsequent circumstances of practice. In short, we need to address the question: *How should we proceed as higher educators when engendering educational experiences associated with developing specific occupational capacities*? A starting point is to find a legitimate place for, and acknowledge the significance of, providing and integrating

experiences in practice and academic settings. Certainly, as highlighted above, there is a need to guard against such experiences and provisions only reproducing occupational capacities in a narrow and confining way. While it is important to develop students' canonical knowledge of the occupation in its conceptual, procedural and dispositional forms, it is also essential to develop the kinds of critical capacities required for practising professionals and practitioners who are able to monitor, evaluate and enhance their practice in the particular circumstances in which they are enacted. Although much concern expressed above is about the transition from higher education into initial employment, these very capacities are central to practitioners' ability to adapt, refine and enhance their practice across their professional lives. Narrow and limited outcomes associated with just engaging with procedural capacities would serve few interests: certainly not those of the graduates, the workplaces where they will practice, those whose are the object of that practice, their occupation or the national well-being. Consequently, whilst provisions of higher education need to develop students' specific occupational practices, this development needs to occur in conjunction with securing students' capacities to understand and apply that knowledge, informed by critical perspectives and strategic processes that can be utilised for productive practice and further development in the various circumstances in which they will engage their occupational capacities. In essence, graduates need to be critical and adaptive in their practice, and these perspectives can contribute to achieving that goal.

Hence, it is necessary for those teaching in higher education to understand how best to organise and enact appropriate curriculum and pedagogic practices and realise these outcomes for higher education students. Here, some premises are suggested to guide the discussion that follows.

Firstly, learning is something that individuals do as they construe, construct and engage with what they experience.

Secondly, that learning is shaped by (a) individuals' earlier experiences and capacities; (b) the kinds of activities and interactions in they engage in, (c) the kinds of guidance and support they receive through these processes, and (d) the effort individuals invest when engaging in these activities and interactions, including those with teachers and others who are potentially supporting their learning.

Thirdly, the kinds of knowledge they need to learn for occupations arises in the socio-cultural world outside of them, and is refined over time through its use and deployment as practices, through its transformation as new understandings and procedures arise, and through how it is manifested in particular circumstances. So, the geneses of this knowledge are social, cultural and situational.

Fourthly, for individuals to learn this knowledge there is a need to engage with sources that make that knowledge accessible to them and from where they can construct it. Hence, those teaching in and administering in programs in higher education need to consider what kinds of experiences students will have and through which they access the knowledge they need to learn.

Fifthly, and consequently, individuals' learning arises through relations between the personal and social contributions to human development (i.e., learning) and at the same time it contributes to society's remaking of culture (i.e. developing further

culturally- derived occupational knowledge) (Donald 1991). All of this suggest that curriculum perspectives emphasising learning through practice (Billett 2006a) and then integrating those experiences need to be considered to realise the desired outcomes.

Sixthly, earlier, I have captured these interactions as being based upon the affordances that individuals are provided with – the degree by which they are invited to participate in learning that they need to know, on the one hand, and the degree by which they engage with what is afforded them, on the other (Billett 2001c). It terms of affordances, these comprise the kinds of experiences (i.e. activities and interactions) that are made available to them. Hence, the quality of experiences in both university and practice settings is taken in terms of how they provide access to the kinds of knowledge that individuals will needs to be effective in their selected occupations. However, these affordances will be more or less adept or helpful in assisting others learn. For instance, the experiences provided through lectures, tutorials and access to written material provide the ability to engage with and learn particular kinds of knowledge. However, these affordances may not be helpful in understanding the performance requirements for occupational practice and, variations of that practice as it is manifested in particular situations. These include the kind of circumstances in which graduates will ultimately practice. Consequently, knowledge about them, the opportunity to engage in the procedural aspects of the occupation and develop those capacities to the point at which they can be used effectively, are best afforded by experiences within practice settings. However, beyond affordances are the bases by which individuals elect to engage in and learn through what is afforded them. Ultimately, as proposed above, it is the degree by which individuals engage with what is provided for them that is central to what and how they learn. As already noted, it is helpful to be reminded that educational provisions are nothing more or less than an invitation to change.

The important consideration is how individuals elect to take up the invitation. Students' experiences and experiencing, and, therefore, their learning, are shaped by the personal process of construing and constructing what is experienced, and what they learn. It is held that individuals' ongoing process of knowledge construction (i.e. learning) serves to bring about changes in their knowledge and also remaking those practices (i.e. occupations) they enact (Donald 1991). Just as learning arises constantly through thinking and acting, culturally-derived practices are also remade constantly through these processes. Hence, this combination of affordances and engagement acknowledges that the contributions of both the practice and university-based experiences are important, not least because they each provide particular contributions.

What has arisen in the discussions above is that there are both institutional (i.e. societal) and personal dimensions to this learning and the educational provision, and what constitutes worthwhile educational provisions in terms of meeting students' needs and fulfilling both sets of goals. Consequently, in the following section, there is a discussion of measures of the worth of education can be found within these purposes.

## 2.7 Vocations and Occupations, and Education

Despite the critique that higher education is now becoming increasingly 'vocational', the case made here is that all education is broadly vocational. That is, insofar as education seeks to assist individuals realise what they want to achieve (i.e. their vocations) it is vocational (Dewey 1916). When the educational purposes are about occupational preparation these purposes and those of a specific vocational education can be seen as being one and the same (Billett 2011). In overview, the case is structured as follows. Firstly, consideration is given to the two distinct meanings of the concept of vocations: as an occupation and a personal trajectory. The concern here centres on the educational implications of the relations between these two conceptions. It is proposed that when referring to paid work (i.e. occupations), unless there is personal assent to that work, it is unlikely to be seen by individuals as their vocations. This assent as well as being central to individuals' sense of self (including their vocation) also shapes how they engage with work activities and learn about and through those activities. It follows, therefore, that the education imperative is to identify productive alignments between these two conceptions for learners. It is then proposed that all education should be vocational, in so far as education seeks to assist individuals to realise their vocations in either the short or long-term, in specific or general ways, and in its paid or non-paid forms (Higgins 2005). This does not imply that all education is occupationally specific. However, where it is, the development of the knowledge required for the occupation, including criticality about its performance and its adaptation to new circumstances needs to become a key goal for educational processes. This requirement includes developing the domain-specific conceptual, procedural, and dispositional knowledge associated with occupations and the capacities to use that knowledge effectively and strategically in applications within particular practice settings. This is because the requirements for work are often shaped by particular sets of situational factors, even when the same occupation is being enacted (Billett 2001a). Consequently, more than the canonical knowledge of the occupation (i.e. what is required to practice it), there is a need to understand how this knowledge is required to be used in particular settings of the kind where students experience and learn through practice, and, ultimately, come to apply that knowledge in the instance of the occupational practice beyond graduation.

Also, when considering the learning of these kinds of knowledge, it is necessary to be aware that the construction of rich conceptual, procedural, and dispositional knowledge is not either the sole province of, or is necessarily most effectively supported in, educational institutions. These kinds of knowledge can be learnt through experiences in practice settings and accessing and engaging in authentic practice experiences. Practice-based experiences can provide access to all three forms of knowledge as they come together in and are experienced and engaged in activities and interactions in actual professional practice. It is these activities and interactions that require learners to utilise, monitor and refine their knowledge through engaging in goal-directed activities associated with the enactment of the

occupation. So, each of these settings has its own particular attributes and makes its own contributions to students' learning which, when integrated, stand to provide a rich set of learning experiences that can be generative of the kinds of robust and critical legacies. Yet, beyond the experiences provided and encountered in these two settings, and through which individuals are invited to learn, is also the important role that individuals play as active and directed meaning makers. Hence, consideration needs to be given to the development of students' personal epistemologies that are effective for engaging in and reflecting upon experiences in both settings.

To commence this elaboration is important to understand both the personal and social conceptions of terms such as vocations and occupations.

### *2.7.1 Vocations: Two Conceptions*

As foreshadowed, the concept of 'vocations' is usually seen as having two quite distinct meanings. The first is that of an occupation or form of paid work that has particular societal purposes that have arisen over time. That is, they comprise the occupations that have arisen from societal needs for particular goods and services, and have evolved over time. Along the way, some have become extinct, or relegated to being more about curiosity and quaintness than a functioning occupation. For instance, cooper (i.e. barrel maker), fletcher (i.e. arrow maker), miller (i.e. miller of grain), gold smith etc. and milliner (i.e. hat maker) are examples here. Others are emerging and more in the future will arise, and specialisms or sub-specialisms also seem to be increasing in number and scope. These occupations are seen to have distinct purposes and orderings, and as having particular kinds of worth as judged by societal sentiments or community preference (Billett 2011). For instance, there is often distinctions in the valuing of work between that which is seen to be manual in character and requirement and that which is seen to be more based upon mental activities, with the latter being long privileged (Whalley and Barley 1997). Put simply, occupations are seen to have different standing and status, and these sentiments can be traced back across human history and have an enduring presence. Like their cultural origins, and their form and premises for their enactment, the standing of these occupations is societal. In this way, this view of occupations as vocations is very much a societal construct. That is they are institutional facts: a product of society (Searle 1995).

Vocations can also be seen as a personal journey or trajectory, including 'a calling' or what individuals are called to do either because of its alignment with their personal disposition or preference or societal press to undertake this form of employment (Hansen 1994; Higgins 2005). Certainly, throughout human history, most people have been called to their occupation through the constraints and circumstances of their birth. Only in relatively recent times has wide occupational choice been available for most of the population, sometimes through the provision of educational programs, and thereby the possibilities of individuals being able to

identify, engaged in and realise a broader range of potential vocations. At the heart of this concept of vocations is individual assent. That is, it is a personal decision for individuals to select a particular occupation or activity as their vocation. Only they can do this, albeit that choice is often shaped by societal facts and preferences. This second conception of vocation can be taken quite broadly as both a personal trajectory and set of educational goals. For Dewey (1916, p. 310) "The dominant vocation of all human beings at all times is living-intellectual and moral growth". This view of vocations emphasizes the development of individuals and also the worth of this work as being positioned as much on individual development as a societal purpose. Indeed, Dewey (1916, p. 307) proposed that:

> A vocation means nothing but such direction in life activities as to render them perceptibly significant to a person, because of the consequences they accomplish, and are also useful to his [sic] associates. ... Occupation is a concrete term for continuity. It includes the development of artistic capacity of any kind, of special scientific ability, of effective citizenship, as well as professional and business occupations, to say nothing of mechanical labor or engagement in gainful pursuits.

In this way, Dewey does not rate the worth of occupations on how the social world labels or positions them, preferring instead to premise worthiness on what they mean to individuals and their associates. He suggests: "We must avoid not only limitation of conception of vocations to the occupations, where immediately tangible commodities are produced, but also the notion that vocations are distributed in an exclusive way, one and only one to each person" (Dewey 1916, p. 307). Hence, rather than suggesting individuals are identified only in terms of their paid work, Dewey proposes that individuals are likely to have a range of vocations that are important to their sense of self and their engagement with those vocations. Moreover, within this definition, the worth of vocations is aligned to purposes that have social dimensions, values, and standing, and how it meets individuals' needs. For instance, although across the general community an occupation might have a high or low standing, it may however have particular worth in a particular community and be of particular value to individuals because of their personal preference. In this way, the worth of a particular occupation is not a fixed or objective entity; it is situationally and personally shaped. Indeed, Dewey proposed a vocation as any purposeful and continuous activity that involves a service to others and that also engages personal powers in a way that fosters growth of the individual (Dewey 1916, pp. 350–360). Given this, vocations are held to be both personally purposive and socially aligned practices. Indeed, this societal and personal purposefulness is most evident in the suggestion that the "opposite of vocation is not leisure or cultural activity, but activity that is capricious and involves parasitic dependence on others, rather than cumulative achievement in experience for the individual" (Dewey 1916). Hence, a central concept for a vocation is its worth to both individuals and their communities. Yet, within all this, the positioning of individuals as both practitioners and learners is important. A key difference between what constitutes paid work as employment and a vocation is the degree to which individuals identify with that activity and, hence, how learners engage with them.

Indeed, Martin (2001) suggests that vocations are the work we choose to do as distinct from the job we have to do. Similarly, Hansen (1994, pp. 263–264) proposes that:

> . . . being a teacher, a minister, a doctor, or a parent would *not* be vocational if the individual kept the practice at arm's length, divorced from his or her sense of identity, treating it in effect as one among many indistinguishable occupations. In such a case, the person would be merely an occupant of a role. This is not to say the person would conceive the activity as meaningless. He or she might regard it as strictly a job, as a necessity one has to accept, perhaps in order to secure the time or resources to do something else. Thus, in addition to being of social value, an activity must yield a sense of personal fulfilment in its own right in order to be a vocation.

The educational purposes arising from this view of vocation, which is adopted here, are quite clear. They principally include assisting individuals: (i) to identify to what occupation they are suited, (ii) in developing their capacity for productive engagement in that occupation, and (iii) to generate the capacities required for further developing their vocational capacities across their working lives. The societal purposes and processes need to be aligned with individuals' purposes and interests. This alignment is essential given the effortful process of construction of the kinds of knowledge required for demanding and complex occupations. Beyond individuals' existing capacities, the exercise of the effortfullness required for rich learning is most likely to be premised on their interests. This is important because individuals' learning of the conceptual and procedural capacities and dispositional qualities to practise their preferred occupation requires effort, assent, and intentionality. None of these are likely to be forthcoming in productive ways unless individuals find meaning in occupations that they are learning and/or practising. Perhaps most helpfully it is the development of these capacities which leads to individuals nominating their occupation as their vocation, and then proceeding with their learning on that basis. That is, the work is worth doing and learning about.

Given this particular emphasis on meeting and realising personal goals, it is possible to conclude that anything that passes as education needs to be vocational in so far as it addresses individuals' needs and trajectories (i.e. assist them secure their vocation) (Higgins 2005). Moreover, the importance of learner engagement needs to go beyond a consideration of purposes and approaches to curriculum and pedagogy to focus on meeting the needs of learners as well as the requirements of their selected occupation are likely to be essential. Given this close relationship amongst occupations, vocations and education it is necessary next to elaborate something of those purposes and relations.

## 2.8 Occupations, Vocations and Education

Taking the earlier cue that universities are now largely offering higher vocational education, and that this emphasis may well be aligned with many students' vocational intents in both meanings proposed above, it follows that the key purposes

and worth of education can be found within the alignment between social and personal needs (Quicke 1999). More concretely, Dewey (1916) proposes two purposes of education for vocations: (i) identify to which occupations individuals are suited, and (ii) develop capacities required to realise their vocations. The key focus and emphasis in this chapter is on the second of Dewey's concerns: assisting individuals develop the capacities to realise their vocation (i.e., be effective in their preferred occupation), which seemingly is what governments, employers, professional bodies and industry spokespersons, not to mention students want. This focus includes understanding the goals for occupational preparation and how best these can be realised through higher education, including organising the provision of experiences in academic and practice settings and the integration of their outcomes in securing capacities that graduates can use to enter and be effective in their selected occupation. This view suggests that educational purposes should be directly shaped towards guiding these kinds of outcomes. That is, they should articulate the kinds of knowledge that are required to be learnt for effective work practice.

### *2.8.1 Knowledge Required for Effective Occupational Practice*

An understanding of the kinds of knowledge required for effective occupational practice (i.e., expertise) has arisen through the outcomes of three decades of focused inquiry into what constitutes expert performance, largely within cognitive psychology (Chi et al. 1981, 1982; Ericsson 2006; Ericsson and Lehmann 1996; Glaser 1989; Larkin et al. 1980), but also socio-cultural accounts of doing and learning. This long-standing inquiry sought to identify the kinds of qualities that distinguished experts from novices to understand how the latter could best progress to the former. It found that effective occupational performance relies upon three dimensions of knowledge. These are:

- Domain-specific conceptual knowledge – 'knowing that' (Ryle 1949) (i.e., concepts, facts, propositions – surface to deep) (e.g., Glaser 1989)
- Domain-specific procedural knowledge – 'knowing how' (Ryle 1949) (i.e., specific to strategic procedures) (e.g., Anderson 1993; Sun et al. 2001)
- Dispositional knowledge – 'knowing for' (i.e., values, attitudes) related to both canonical and instances of practice (e.g., Perkins et al. 1993), includes criticality (e.g., Kincheloe 1995; Mezirow 1981)

A particular domain of occupational knowledge required for effective performance is premised on each of these dimensions of knowledge and their rich integration when performing work-related activities. So, rather than generalisable capacities or cleverness, the ability to perform effectively is largely premised upon the possession, integration and enactment of domains of activity in which individuals have to participate and perform. Each of these dimensions of domain-specific knowledge has its own hierarchy and qualities (e.g., specific and strategic procedures, factual to complex conceptual premises). So whereas some of this

knowledge can be secured through easy access (e.g. the names of things), others require rich experiences and repeated activities to develop the conceptual structures, including relational and causal associations. In particular, these relations and causal associations are likely to be developed by individuals having experiences in which they witness the enactment of occupations through experiences that afford opportunities to enact and monitor the use of the knowledge and appraise its use and, consequently its causal effects. So, nurses and doctors can monitor the ways in which particular treatments are helpful in addressing particular illnesses and with different kinds of patients. This example emphasises the need for opportunities that are of the diversity, kinds and duration that lead to the construction of personal domains of this domain-specific occupational knowledge.

Beyond the hierarchies within these categories of knowledge, there seem to be at least three levels of these forms of domain-specific knowledge (Scribner 1984). First, there is the canonical knowledge of the occupation that comprises the knowledge that constitutes what all of those practising this occupation would be expected to know. Then, there is the manifestation of situational requirements where the occupation is practised, the knowledge required for a particular instance of practice. Third, is the personally constructed domain of occupational knowledge that arises ontogenetically (i.e. throughout individuals' life history). Consequently, to become effective as a practitioner there is a need to develop the domain-specific procedural, conceptual (Glaser 1984), and dispositional (Perkins et al. 1993) capacities required for the occupational practice. These are the domain-specific procedures, concepts, and values required to be a doctor, hairdresser, plumber, vacuum-cleaning sales person, or lighthouse keeper. In addition, there is the particular set of concepts, procedures, and dispositions that are required for effective practice: that is the requirements of the particular circumstances in which doctoring, hairdressing, plumbing, vacuum-cleaning, and lighthouse keeping are practised (Billett 2001a). These forms of knowledge are those required to be accessed and constructed by individuals seeking to learn them.

Conceptual or declarative knowledge comprises a hierarchy of concepts, fact, propositions, and richly interlinked associations among these that comprise higher or in-depth conceptual knowledge. This is the form of knowledge that can be spoken about and written down. Hence, this knowledge is sometimes termed as 'declarative' (Anderson 1982; Glaser 1984). Consequently, much of this knowledge can be represented in books, texts, and other forms of media or artefacts and also stated by individuals. The progression of conceptual development is usually held to be that which moves from understanding basic factual knowledge through to propositions and then associations including causal links amongst concepts and propositions. Indeed, deep conceptual knowledge is usually associated with understanding the relations and associations amongst sets of concepts and propositions, including these causal links (Groen and Patel 1988). So, for instance, a medical practitioner has to know the names and part of the human body, their roles, weaknesses, susceptibility to disease and means of redressing these through medical treatments, and which treatments are likely to be most effective in particular circumstances. However, beyond these capacities is the requirement to understand the links, and

causal associations among a range of different conditions, potential treatments and the patient circumstances in considering, appraising and ultimately proposing particular treatments. Also, there may well be a requirement for this kind of knowledge quite broadly applied, as in general practice, or more intensely and deeply within an area of medical specialism.

Procedural knowledge, on the other hand, is the knowledge that we use to do things and achieve goals, either manually or through mental processes. Yet, much of this knowledge cannot be easily declared or easily represented, because much of it is not easily be able to be declared (e.g. the processes you are using to read this text) and is often rendered tacit or not consciously or easily recalled because the means of its construction is halfway to render it not requiring to be drawn into conscious memory (Anderson 1982; Shuell 1990). This form of knowledge is required to be engaged with and practised in order for its development to occur. The hierarchy of procedural knowledge is usually seen as highly specific procedures (single manual actions) through to the appraisal, consideration, organisation and enactment of a procedural response to a problem or goal state. Progression is usually held to be from the acquisition of specific procedures (e.g. the taking of blood pressure, temperature, applying bandages and other dressings) through to strategic knowledge (e.g. organising a sequence of medical treatments). The development of specific procedures is usually associated with opportunities to rehearse them, until they are rendered into single procedures which removes the need for conscious memory to be enacted in their deployment, thereby permitting that conscious memory to focus on more strategic issues (Anderson 1982). The higher order kinds of procedures, which include the ability to organise a set of activities, evaluate and monitor their progress and make changes or progress, are premised upon engaging in a range of experiences which will allow judgements to be made and refined about how particular procedures might be most effective and how they need to be enacted. This development, at all levels, likely arises from the opportunity to participate in a range of activities and interludes associated with the particular domain of activity for which the procedures are being developed. The rehearsal of specific procedures permits them to be undertaken without conscious thought. Then, the repertoire of experiences that individuals can access and understand leads to the ability to predict and evaluate performance.

Dispositional knowledge comprises interests and beliefs, which not only energise the use and development of concepts and procedures (Perkins et al. 1993), but also shape the direction, intensity, and degree of their enactment (Billett 2008). Dispositions are likely developed through individuals beliefs and are negotiated through their encounters with particular experiences. They appear to have two kinds of dimensions. On the one hand, there are the values, interests and intentions of the individual, and also the norms, practices and ethics associated with the particular occupation. Moreover, there is likely to be hierarchies associated with disposition in which personal preferences might be confronted by orthodoxies within the particular occupation. A particular quality which is often ascribed to the professions is that those who practice them do so ethically, and in the interests of those who are that clients or patients, rather than their own interests (Beckett and Gough

2004; Minnameier 2014). Most likely, these capacities develop across individuals' personal histories, premised upon the kinds of experiences they have and how they reconcile these experiences with what they know and have come to value.

In these ways, these three dimensions of knowledge can be categorised and considered as bases to organise experiences which can be developed in ways associated with the enactment of effective occupational practice. Yet, it is also important to emphasise that the enactment of occupational activities is usually premised upon the deployment of these three kinds of knowledge together and in related ways. When practitioners consider a particular task, they are using procedures to identify concepts, propositions and causal associations, and that choice is likely to be shaped by their interests, preferences and values that extend to the amount of effort they believe should be invested in the particular activity. When an individual enacts a particular activity this enactment is not just procedural, but shaped by concepts and propositions and, again, their dispositions are likely to be central to how they go about that task. Moreover, the kinds of dispositional qualities that individuals have would be premised upon that concepts and what they have experienced in the past, which includes successful procedures and those which have been less effective for them. Consequently, ultimately, effective professional practice comprises the bringing together of these kinds of knowledge in ways which permit informed, effective and considered practice to occur.

The important consideration arising from these accounts here is of finding ways for individuals' conceptual, procedural, and dispositional development to progress to become effective in their selected occupation. As noted, apart from efforts to develop them separately, these three forms of knowledge are richly interconnected and interdependent. However, the effectiveness of this interdependence usually arises through opportunities to engage in episodes of practice in which these forms of knowledge are deployed and developed together when enacting work activities (Billett 2001b). This process provides opportunities for understanding the particular set of circumstances for goals to be achieved and procedures advanced. It is through these episodes of practice that certainty about performance is developed, their effectiveness can be monitored and modifications made along the way, procedures can become compiled and automated to avoid recalling conscious memory, and dispositions tested and appraised across a range of practice experience. Importantly, however, each occupation has particular kinds and orders of concepts, propositions, norms and procedures, sets of values, and organising ideas that constitute its canonical knowledge (i.e. the knowledge which would be expected to be possessed by all who practice that occupation). This canonical knowledge is that which is often attempted to be stated as occupational standards and captured as statements for performance and curriculum content and outcomes. Yet, while this canonical occupational knowledge is important and needs to be learnt, and is often the focus of educational efforts, occupational performance is also shaped by situational factors that constitute the requirements for performance in practice.

### 2.8.2 *Situated Performance*

Importantly, and perhaps surprisingly, there is no such thing as an occupational expert per se. Expertise comprises not only profound knowledge of capacities to be effective within the domain of practice but the ability to apply that in a particular situation in ways which is seen as being effective in that circumstance. Moreover, a key hallmark for expertise is the ability to be able to engage effectively with non-routine activities in such a circumstance. Consequently, more than having canonical occupational knowledge there is also a requirement to understand the particular circumstances of practice and requirements for performance in practice. Hence, expertise is premised upon situated performance. Only in the circumstances where that practice is enacted is it possible to make judgements about the efficacy and elegance or otherwise of occupational performance. So, not only does occupational expertise take time and extensive repertoires of experience to develop and hone (Anderson 1982), but it is also required to be shaped through particular episodes of experiences that comprise situated instances of practice. However, and has been emphasized above, this domain of occupational knowledge is more than 'techne' – technical capacity, it is far broader and more encompassing than that. Even when considered quite narrowly in terms of occupational practice, "there is also the need to: generate and evaluate skilled performance as technical tasks become complex and as situations and processes change, [to] reason and solve technical problems, be strategic, innovate and adapt" (Stevenson 1994, p. 9). Moreover, professionals also need critical insights and to be reflexive in how they apply what they know, as requirements for work change or are shaped by particular situational requirements that cause decisions to be made about how to progress amongst a range of possible options.

Consequently, the preparation of effective professional practitioners in higher education programmes, and the capacity to move smoothly into practice upon graduation, necessarily needs to account for elements and instances of situated practice requirements. Canonical occupational knowledge alone would be insufficient for the individuals to move smoothly into professional practice. Therefore, experiences for particular students or cohorts of students are likely to need to be organised so that they can come to understand directly or vicariously through engagement with peers something of the diversity of the instances of professional practice. Understanding something about different ways in which the goals for the practice are constructed, the means by which those goals are sought to be realised and the bases by which such outcomes are to be valued, are likely to be helpful not only for the initial transition from higher education into practice, but also the conduct of effective practice within and across professional working lives. That is, the adaptability of professional knowledge is not just premised upon the individual's manipulation of that knowledge, but also an awareness of the different kinds of requirements, options, practices, barriers, etc. that constitute the circumstances which individual practitioners will need to confront.

In conclusion, it has been proposed here that to inform considerations of how realise the effective development of occupational-specific capacities through higher education provisions that these should include the use and integration of students' practice-based experiences. Therefore, it is necessary to review what constitutes the purposes of higher education, both contemporaneously and also perennially so that these kinds of provisions, can be effectively designed, implemented and evaluated. This chapter has sought to set out some of the key premises through which the purposes of higher education can be considered. Overall, it argues that, against what many might propose, the focus on preparation for occupations is a perennial purpose for higher education and its current manifestations are largely a continuity of that purpose. In particular, it has proposed that given this purpose, the emphasis on providing integrating practice-based experiences is a step to address both perennial concerns about and a response to contemporary realisations that the learning of all kinds of knowledge cannot be achieved through the experiences provided through higher education institutions alone. Indeed, rather than seeking to marginalise, minimise or compromise what constitutes higher education provisions, the provision of practice-based experiences is therefore central to this task. However, it has been proposed that what is required is a clear understanding of how these purposes can be identified and realised through contemporary higher education provisions. Attempted here has been an attempt to set them out and the elaborate the specific purposes for integrating those experiences.

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# Chapter 3
# Educational Purposes of Integrating Experiences in Practice and University Settings

## 3.1 Integrating Practice-Based Experiences: Educational Purpose

Educational goals and processes should always be intentional, because they are directed to serve particular purposes (Brady and Kennedy 2003). Therefore, given the prevalence of the need for and providing practice-based experiences within contemporary higher education, it is important that students' engagement with these experiences and their integration into their programs are guided by clear educational purposes. From such purposes, curriculum and pedagogic practices can be used selectively, but with clear intent in seeking to achieve particular educational outcomes (Bellack 1969). A helpful starting point is to acknowledge that both practice and education setting provide distinct kinds of experiences that can potentially make particular kinds of contributions to higher education students' learning (Ricks 1996). In this way, neither setting is necessarily privileged over the other. Both can provide rich learning experiences and also provide those that are unhelpful and ill-directed (Eames and Coll 2010). There is also interdependence between the two settings. Potentially, they provide complimentary and specific contributions that may not be accessible otherwise, and yet when they are ordered effectively and engaged with effortfully, offer students a potent set of learning experiences (Cooper et al. 2010). Such a proposition prompts a consideration of not only their individual contributions, but what can be achieved when both sets of experiences are purposefully integrated or reconciled (Billett 2009c).

Experiences provided in and by higher education settings can provide access to a range of conceptual knowledge, premises for developing procedural capacities, and access to norms associated with a particular occupation, some of which might be difficult to access in workplaces. Moreover, these settings can provide experiences through which to engage in introspection, critical consideration of and a deepening of this knowledge, and reconcile what students have experienced and learnt in practice settings (Kincheloe 1995; Simon et al. 1991). Furthermore,



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intentional instructional processes or pedagogic practices can be used to engage students in considering and reconciling their experiences in practice settings with the aims and goals of their educational programs (also see Chap. 8 – Pedagogic Practices Supporting the Integration of Experiences). Importantly, it is likely to be particularly helpful for students returning from their practice experiences to share, critically appraise and come to understand something of the range of experiences and outcomes that their peers have experienced within their practice settings (Grubb and Badway 1998). The impact of these kinds of experiences may well be optimised when supported by the kinds of activities that can be best organised in educational settings (e.g. discussion and critique; sharing and comparing) and that can be facilitated by teacherly guidance or organisation.

Practice settings, on the other hand, can provide a range of experiences that are authentic in terms of the enactment of an occupation in particular work situations. These experiences can afford access to a range of contributions that are potentially richly informative in terms of conceptual, procedural, and dispositional forms of occupational knowledge (Billett 2001b). However, without the platform of facts, concepts, and propositions that are perhaps best developed through experiences in higher education institutions, students may well struggle to understand, effectively engage with and be able to monitor and reconcile their experiences in practice settings. Yet, conversely these facts and ideas may lack relevance and pertinence unless they are associated with instances of practices (Henderson and Alexander 2011). It follows that key considerations for integrating practice-based experiences in higher education curriculum is the interdependence between experiences in the two settings and reconciling their contributions and in ways that extends to redressing potentially limiting experiences that they might encounter in one or the other settings (Cooper et al. 2010; Orrell 2011).

Despite acknowledging the contributions afforded by both kinds of settings, it is also important to emphasise the salience of students as active and agentic learners. It is students who participate in, negotiate, and learn in and across both practice and university settings. They, not their teachers or mentors, are the meaning-makers who negotiate their learning across these settings. However, their teachers or mentors can mediate that learning, most likely after the event. These interventions can be important. Students' learning is an ongoing process, and shaped by what they experience in both of these settings and how they come to construe and construct from what is afforded by them and then work to reconcile their experiences across both settings (Billett 2009a). Of course, there are other and important contributions made outside of these two settings, such as those provided by peers, associates, family members, plus access to text and other information through books and electronic means. These contributions are often important. For instance, it was found in a study that medical students' accommodation during practical experience provided a circumstance where peers could engage in discussing and elaborating aspects of medical work and knowledge (Cleland et al. 2014). Moreover, another study, also of medical students, found that they formed close groups of associates who would need to share information, provide support and assist collectively their education (Richards et al. 2013). Yet, to effectively learn the kinds of principle-

based and codified forms of occupational knowledge that are the object of higher education courses often require active, but guided, engagement. Essentially, we do not want students to engage in unnecessary and unhelpful epistemological adventures. The bodies of knowledge they need to learn, whilst constantly changing, can be accessed through experiences in both of these settings, but need to be secured through guided engagement (Brown and Palinscar 1989; Rogoff 1995). Moreover, this kind of engagement and development is probably applicable to many, if not most, forms of occupational practice, and is not restricted to the top-end professionals (e.g., law and medicine). Hence, the importance of this rich educational experience premised in its organisation, utilisation and integration of experiences in two principal settings: education institution and the setting where the occupation is practised (i.e. workplaces).

Moreover, the expectation for those whose occupation is referred to as 'professions' is for practitioners to be self-initiating in their learning and directed in monitoring their capacity to maintain the currency of their professional practice, and across their professional working lives. However, it is these qualities that are also needed to be an effective student in higher education – as proactive and agentic learners – as they engage in experiences in both the practice and academic settings. That is, the kinds of capacities that will assist them learn interdependently in practice settings and to reconcile what they experience in both settings are those they will require to sustain their employability across working lives. Perhaps more than in any other form of higher education, engagement in practice experiences presses students into being active and agentic learners. This occurs away from the direct gaze and mentoring of their teachers. Indeed, as noted, it is these very qualities that will be required for them to be effective professional practitioners in the longer term. Hence, the development of the capacities to be active, agentic, but interdependent learners in the relatively short term goals of engaging in and reconciling experiences in their university courses, is also required across their professional working lives. So, beyond: (i) the development of the domain-specific knowledge that comprises their occupational competence, and (ii) the situated versions that comprises their circumstances of practice, there is also the need to (iii) develop the qualities of agentic learners that are essential for effective professional practice and rich learning.

Consequently, more than just organising experiences for students in educational institutions and workplace settings, there is also a need to focus on preparing students as agentic learners, as part of their professional preparation so they can engage in the reconciliation of the two sets of experiences. In sum, to optimise the educational worth of integrating practice experiences within higher education provisions there is a need to:

- identify and acknowledge the pedagogic potential of practice experiences, and consider how these can be engaged and integrated within higher education curriculum to maximise students' learning experiences;
- include within curriculum considerations for higher education about how best to prepare for, position, sequence, and identify the most appropriate duration

of practice experiences, and consider support for learning from those practice experiences; and
- identify what kinds of experiences might best develop, sustain, and utilise students' personal epistemologies, including their critical engagement and introspection.

In all, these kinds of higher education experiences need to be advanced through premises that acknowledge the interdependence between the contributions of the two settings and these experiences through curriculum, pedagogic, and epistemological practices. It is these kinds of educative actions that can be planned for, enacted, and experienced in realising the educational potential of practice-based experiences. From these bases, it is possible to integrate practice-based experiences within higher education provisions that can develop robust and critical occupational knowledge. However, these activities and the students' efforts need to be directed towards clearly defined purposes. It is these purposes in a more general and then specific forms that are the focus of this chapter.

## 3.2 Educational Goals for Integrating Experiences in Practice and Educational Settings

It is helpful to consider how experiences in practice settings can assist higher education students to achieve two broad educational goals: (i) understand their selected occupation, and (ii) develop the capacities to practice effectively and enjoy smooth transitions to practice. It was these two purposes that Dewey (1916) proposed as being key objects of education for occupations. These two purposes are briefly outlined here.

### *3.2.1 Identify to What Occupations Individuals Are Suited*

Dewey's (1916) first educational purpose was that it was essential for individuals to identify to which occupations they are suited. To do otherwise, he cautions, risks individuals being engaged in work in which they have little interest or that had little basis for becoming their vocation (i.e. what they what to assent to do). Indeed, identifying what occupations suit individuals is a key goal for occupational preparation because when individuals are engaged in activities to which they are not suited or not well aligned with their interests, that these engagements can be both personally and societally wasteful. Indeed, Dewey (1916) proposed that:

> An occupation is the only thing that balances the distinctive capacity of an individual with his [sic] social services. To find out what one is fitted to do and to secure an opportunity to do it is the key to happiness. Nothing is more tragic than failure to discover one's true business in life or to find that one has drifted or been forced by circumstances into an uncongenial calling. (Dewey 1916, p. 308)

Using the example of galley slaves, who are coerced into their work, Dewey illustrated that work that is not individuals' calling is unlikely to be fully engaged with by them except when coerced. Perhaps, a more common risk in contemporary times is that individuals will elect to engage in a particular occupation because others (e.g., parents, friends) believe they should, even though it may not be their preferred option or is of little interest to them. Alternatively, they may select an occupation without understanding its requirements or their suitedness to engage in it. So, these factors or the level of university entrance score should not be determinants of the kinds of occupations individuals should aspire to engage in. Instead, there needs to be a consideration of what occupations individuals are interested in and are likely to pursue as their vocation, and in what ways their attributes align well with their selected occupations.

One way in which practice-based experiences can assist here is to provide opportunities for students to trial and experience their selected occupations, or even some variations of those, early in their courses. These experiences can offer opportunities for students to understand whether or not they are suited to the occupation that are considering or have selected to learn about or which parts of that occupation best suit their interests and capacities. Students often have a desire to understand exactly what constitutes the occupation to which they are about to invest considerable time, effort and financial resources. In an earlier research project (Billett and Ovens 2005), senior high school students expressed concern about not knowing whether they would enjoy and be suited to their selected occupation because it was only in the third year of their degree programs that they would have the opportunity to practice them. These high school students commented that by that point in their degree they would have expended much time and committed significant financial resources to this program (and selected occupation), without really knowing what it actually comprises and whether it is suited to them.

This concern raises the question of at what point in university students' development should they be able and is it desirable for them to access and experience working in their preferred occupation. For instance, many individuals are attracted to particular occupations because of their profile or their apparent fit with their gender. Yet, these choices may be uninformed or ill-conceived. Young women's selection of nursing as a preferred occupation arose at least in part as a gendered choice (Newton et al. 2009). Yet, given the attrition rates, many of these young women later find themselves engaged in a form of work that they not suited, not interested in or just do not like doing. That is, they found themselves in an uncongenial calling, to use Dewey's term. Understanding what actually constitutes the preferred occupational practice, therefore, becomes an important consideration for higher education, society and students themselves given the potential personal, community and workplace cost associated with students making inappropriate choices about their preferred occupation. The point made here is that practice-based experiences early in higher education students' courses may assist them more fully understand what actually comprises the occupation in practice, and through engaging in occupational tasks and in those settings where it is enacted, they can make decisions about their suitedness to the particular occupation, or particular

strands or specialism within that occupation (Billett 2011). They might find, for instance, that particular kinds of nursing, doctoring, engineering or journalism suit their particular needs and capacities, and also captures their interest more than other kinds of those forms of work. For instance, in a study of novice medical practitioners, despite having a lot of clinical experience during their education, some made significant changes to their preferred specialisations once they actually were practising as doctors in hospital wards (Cleland et al. 2014).

Consequently, an early inclusion of practice-based experiences within higher education programs might assist students experience and make judgements about their preferred occupations and, and subsequently, something of its strands or specialisations. This outcome can be achieved through their own direct experience or, by learning from other students about some of the variations in that occupation's enactment in practice. Through these means students can come to affirm or question early their choice of occupations. Alternatively, they can identify a particular element or specialisation within that occupation suited to their interests and well aligned to their capacities. Of course, the danger here is that students may have unsatisfactory experiences, those for which they are inadequately prepared or that the particular experience is atypical or unhelpful and this may persuade them to affirm that interest or reject this occupation on ill-informed or unhelpful grounds. That is why pedagogic interventions are required after students have had those experiences, so that their experiences can be mediated.

Hence, as is discussed later, there needs to be both curriculum and pedagogic considerations of how these experiences are enacted and enriched (see Chaps. 7 – Curriculum Considerations: The Integration of Experiences and 8 – Pedagogic Practices Supporting the Integration of Experiences). The enactment relates to the kind, sequencing and duration of experiences in practice settings, and the pedagogic practices relate to how students come to evaluate and make judgements about those experiences. So, more than just merely providing experiences, care needs to be taken to identify appropriate experiences and then organise their enactment and also means through which students consider and make informed appraisals of those experiences.

### *3.2.2 Developing Occupational Capacities*

The second key purpose of educational preparation for occupations that Dewey (1916) proposed is assisting individuals to develop the capacities to effectively practice their preferred occupation. Consequently, a second set of purposes for providing students with experiences in practice settings to develop the kinds of occupational capacities required for them to practice that occupation effectively. These capacities are central to individuals being able to engage in practice and are often a large part of what is expected of them in their transition into practice. Often, the assumption for providing these kinds of experience is that students learn something called 'theory' in university settings and something called 'practice' in

practice settings. Certainly, experiences in workplaces can provide access to authentic occupational practice that comprises the activities and interactions required for their preferred occupation. Engaging in these kinds of experiences can provide the bases for developing the procedural, conceptual and dispositional qualities needed to be effective in the particular occupational practice. Therefore, considering how that learning in practice settings can be best structured, organised, and refined is an important goal.

A program of research that examined learning through work by workers from a range of different kinds of occupations (Billett 2001b) found that some of the key strengths of learning through workplace experiences were as follows:

(a) access to authentic work activities (i.e., authentic activities, novel and routine);
(b) observation and listening – cues and clues (indirect guidance);
(c) access to more experienced co-workers (direct guidance – development of heuristics) and
(d) practice – opportunities to reinforce, refine and hone what they have learnt.

These contributions to learning were verified as being quite common across a range of different industry sectors by workers engaged in a range of different kinds of work and with quite different knowledge requirements. More recently, a study of workers' ongoing learning across a range of industries and occupations largely reinforced experiences in practice as being the preferred location and form of that learning (Billett et al. 2014). That is, participation in authentic work activities in practice settings furnishes a range of contributions that can support individuals' learning the occupation for which the students are preparing. Nevertheless, a series of limitations to learning through practice was also identified through this programme of research. The limitations include:

(a) learning bad habits and dangerous or inappropriate shortcuts;
(b) the lack of opportunity to practice or extend;
(c) lack of support and guidance;
(d) undertaking tasks but not understanding what or why (i.e., the failure to develop understanding);
(e) experiences that constrained individuals' learning because of a lack of support; and
(f) experiences that were personally or professionally confronting and which inhibited the development of positive occupational identity (Billett 2001b).

These limitations suggest that, whilst there is much that can be learnt within practice settings, and far more than merely extending what has been learnt in university settings or developing the capacities associated with 'practice', workplace settings can also have significant limitations. To address these limitations requires accessing the kinds of support from others in the workplace (including positive and negative modelling) and the kinds of activities and interactions that students are able to engage in by drawing upon those experiences.

Importantly, these contributions to and limitations of learning the students' preferred occupation in practice settings will be manifested in particular ways across

work settings. For instance, a study of student nurses, generated similar findings and would likely concur with the list of positive contributions presented above, in different ways, they also experience some of these limitations (Newton et al. 2009). For some, the preceptor (i.e., mentor) and more experienced nurses with whom they work are helpful in assisting their work and learning. Yet, in other circumstances, these preceptors inhibit the quality of the learning experiences. The kinds of interactions that the students had were in some instances very productive learning and in other circumstances potentially overwhelming and off-putting. However, not all of these factors are able to be controlled by even the most constrained and organised of intended student experiences in workplaces. Unforseen moments and incidents arise, events occur, complications manifest themselves and routine tasks suddenly become far more complex and demanding than routinely is the case in workplaces, and these can comprise what (Bailey et al. 2004) refer to as 'teachable moments'. These are the characteristics of everyday work practice and why individuals need to be effectively prepared for those activities, including having the capacities to be critical and monitor their own responses and performance (Lakes 1994). Such capacities are likely to be developed when students are able to both experience these kinds of events, and also engage with others and their teachers in drawing out the meaning and consequences of those experiences as premises for learning knowledge which will be both immediately applicable and strategically empowering (Bailey et al. 2004).

It follows that when considering integrating and reconciling students' experiences in practice settings, utilising the productive contributions of experiences in these settings and redress, or attempt to limit, those that potentially can lead to unhelpful or incomplete learning outcomes. In short, educators in higher education need to work to realise the contributions of practice settings while being mindful of their limitations.

## 3.3 Specific Purposes for Integrating Student Experiences

Outlined above are two broad educational goals to be realised through providing higher education students with practice-based experiences and then using those experiences to realise the intended purposes of their degree programs. However, in the learning and teaching projects exploring work-integrated learning across seven universities that will be discussed in detail later in this book, a set of distinct educational purposes were identified for integrating experiences across practice and university settings. Given that education processes should be informed by clear purposes, having and being explicit about what kinds of educational goals are intended to be achieved, it is important for there to be an alignment between the kinds of outcomes (i.e. learning) likely to arise from the experiences provided by the educational program. Certainly, from these twenty five projects that comprising the two fellowships (Billett 2009b, 2011) were identified a set of six specific purposes associated with the providing and integration of practice-based experiences in

higher education. This set of educational purposes are discussed here to inform decisions about the kinds of experiences provided for higher education students and how they might be ordered, organised and augmented. Across the projects, reasons for providing these experiences included:

1. learning about selected occupations;
2. learning about some variations of occupational practice;
3. building the capacities required to engage in and be an effective professional practitioner;
4. extending the knowledge learnt in university settings;
5. providing orientations to circumstances where the occupation is practiced and their requirements; and
6. meeting requirements of occupational or professional licensing.

So, whilst being categorisable within the two educational purposes that Dewey (1916) set out above, each of these specific purposes are now elaborated along with considerations for how the integration of experience might more specifically address such purposes, drawing upon the findings from the two teaching fellowships.

### *3.3.1 Learning About Selected Occupations*

Although students often enroll in courses to learn how to practice a specific occupation, their understandings about what actually constitutes that occupation and how it is practised can be quite limited or based on unrealistic or uninformed accounts (Billett and Ovens 2007). For instance, and as noted, many young people (i.e. women) enrolled in nursing courses based on idealized conceptions of nursing and what constitutes nursing work (Newton et al. 2009). Some of these students, particularly those who were school-leavers, referred to wanting to be a nurse and some had even engaged in part-time work associated with health care. Yet, largely, their decisions about a preferred career were uninformed by the actual experiencing of nursing. Many of these students reported wanting to nurse for altruistic reasons, because it was about assisting sick people. Yet, much of that reasoning was also associated with them engaging in work for which they would be recognized as being a decent person (i.e. someone who looks after sick people). However, their first experiencing of actual nursing work often only occurred in their practicums. Through these instances of nursing students were often confronted by the realities, rather than the ideals, of this work. For instance, rather than being thanked for their good work, sometimes their patients appeared less than grateful when being nursed. So the practicums provided an experiencing of some of the actualities of what individuals select as their occupations.

The need to support students' understanding about what their selected occupation comprises was also evident with students in the journalism, public relations, education, tourism, social work projects. It was only through opportunities to experience their selected occupations being practised and being able to understand

what this work comprises that the requirements for performing that occupation were made explicit. For instance, many international students in a social work program came from countries that either had no social welfare systems, or very rudimentary ones, and no social workers. Hence, they had no understandings about the kind of work they were being prepared for, there alone whether or not they were suited to it. This understanding had to be intentionally promoted through specific kinds of experiences organized by their teachers, who realized that without such interventions their practicum experiences would be of limited educational worth. In this instance, practicum experiences for these students ultimately assisted them understand what constituted the kind of work for which they had chosen to study, but these experiences had to be augmented by teacherly inventions so that these students could effectively learn about their selected occupations.

So, through practicum experiences, students can experience and consider how the practice and requirements of their selected occupation are aligned with their interest, capacities and expectations. This experience then inform and assist them arrive at conclusions about their suitability for this occupation. However, although some occupations are able to be observed, engaged with and even practised without participating in preparatory programs, this is not always the case. Some require preparatory practices as part of the higher education provision, before they can effectively participate. Examples include specific skill development, such as that which occurs through clinical skills labs for nurses and micro-teaching skills workshops for education students, or even effective bed-making and basic dressings. In these ways, engaging in practicums can be helpful in assisting students understand what constitutes their selected occupation in practice, and also, potentially, the degree by which it meets their expectations and ideals, and suits their needs and readiness for their working lives.

In sum, if the educational purpose is to assist students understand the nature of their preferred occupation then it is important that these experiences are sequenced early in the students' preparatory program. Whilst not necessarily being of a long duration, these experiences need to provide access to observe and/or participate in the enactment of that occupation. In addition, as noted, as many occupations' practices have specializations (e.g. see below in nursing) that learning something about these specializations might be helpful for students' decision-making about their preferred study and career pathways. Providing students with opportunities to discuss and share experiences of their occupation with other students may be helpful and important. This is most likely to be helpful when students have had distinctly different kinds of work experiences or are engaging in different forms or specialisms of the occupation. Having opportunities to learn about the different instances of occupations has educational benefits for career preferences, knowledge variations of practices, and the valuing of particular kinds of practice. So, for instance, journalism students who have had practicum experiences in broadcast or print media can share them with students who have had other kinds of experiences, thereby all learning about these different forms of journalism and the different requirements for these forms across different settings. In this instance (Journalism project), educational provisions were organized for students to share their experiences with

other members of the student cohort on the completion of their practicums. But most importantly, having authentic practices can be important for assisting students learn about their preferred occupations, and whether that selection has been apt.

### *3.3.2 Learning About Variations of Occupational Practice*

As noted above, beyond learning about their preferred occupation per se, engagement in work-based activities can provide students with opportunities to understand something of the variations of that occupational practice and/or specialisations within it. Through experiencing their selected occupation in more than one circumstance of practice can generate a range of learning outcomes. Knowing some variations of the occupational practice provides the potential to develop richer understandings about how that occupation is enacted differently in distinct circumstances. Through these experiences arises the potential for generating robust understandings about that occupation and its variations or specialisms. Occupational performance requirements are often shaped by localised factors (Billett 2001a), such as the kinds of clients, their needs, expectations, available resources, degree of other kinds of practitioners available, working arrangements etc. Likely, each instance of occupational practice is in some ways distinct. These distinctions are often more than superficial variations in work procedures, they are central to what constitutes effective occupational practice. For instance, the practice requirements for a doctor, nurse, accountant or lawyer in a small country town might be very different from those in a large regional centre or a metropolitan city.

At one level, this understanding of difference is focused on the kinds of activities that will be required to be undertaken, and at another level it is a range of tasks which will fall to such practitioners, depending upon the range of expertise and specialism available. Therefore, the requirements for the effective performance of that occupation are likely to be highly situated (Billett 2001a). In particular, understanding the different ways that occupations are practised can be particularly helpful for assisting students' smooth transition from university to employment in the particular occupation. If, for instance, graduates have already had experiences in different instances of occupational practice, they may well have a more open view about how it will be enacted in particular ways. If, however, they have only had access to one set of experiences this may limit their openness to what they confront when first employed in a particular work setting.

Consequently, it is helpful for students to experience directly or vicariously to understand something of the variations of their selected occupational practice. This experience can assist them comprehend the differences in requirements for performance in those settings, and where they will be expected to perform that occupation on graduation. Understanding workplace norms, practices and performance requirements being quite different from those situations they encountered during their time as a student can assist this goal. As noted, this kind of understanding can also be important for developing adaptable occupational knowledge that can

serve practitioners across their professional working lives. That is, more than merely preparing graduates for the particular circumstances in which they will initially find employment, such understandings are likely to be helpful when they are facing new challenges within and across their working lives. These kinds of experiences likely support the development of knowledge that is adaptable across circumstances is required for effective practice across a range of circumstances and time (Stevenson 1991).

Hence, the educational goal of preparing students for effective transitions into work situations (i.e. making them job-ready) can be assisted by exposing them to some diversity of occupational practice and requirements and teacherly interventions to consider the nature of variations in occupational practices. This process is one that can be supported by drawing on the students' experiences in diverse settings and practices. For instance, when students have the opportunity to share their experiences with others, teacherly interventions can be helpful (Newton 2011). The commonalities and differences across the instances of the application of the occupational practice can be identified through a group facilitated process. So, for instance, when the journalism students had the opportunity to engage in focus group activities and share experiences after their practicums they were able to learn much about the differences in how the occupation of journalism is practised and also across the print and broadcast medias. This kind of intervention makes available knowledge of the variations in how the occupation is practised and what is the source of differences in performance requirements. These experiences can potentially assist students make informed choices about the form of journalism or nursing, for examples, they want to work in and also come to understand variations in how those occupations are practised. Consequently, if the educational purpose is to assist students understand something of the diversity of the occupational practice and develop robust understandings from it, particular kind of curriculum and pedagogies practices are probably required. This practice might include sending students either individually or collectively to places where they can either observe or engaged actively in the occupation. In one of the fellowship projects, teacher education students went in small groups to a number of different schools for half a day each over a three-week period (Teacher Education 2 project). In this way, they came to experience a range of different schools settings, and observe the physical layout, and possibly some of the teaching processes within those schools. Whilst varying in length, the duration of theses visits here, is likely requires only to be long enough for students to understand the particular qualities of the school and how the teaching is conducted there.

In sum, students' knowledge about variations of the occupational practice is important. It will rarely be known in which workplaces students will find employment upon graduation. Therefore, students may not be familiar with particular kinds of practice requirements when they transition to practice. Hence, the awareness created by the processes mentioned above might position students to be more knowledgeable about and able to engage effectively in their practices upon graduation. Importantly, knowing how and having the capacities to adapt to the

requirements of the particular workplaces and also activities which might be novel to those workplaces in which they encounter during that career.

In this way, the educational goal of students learning about some variations of the occupational practice and how these are generated by particular requirements of workplaces can assist students have smooth transitions to practice beyond graduation. It also, potentially, makes them more adaptable within their working lives. In addition, these experiences can provide students with some basis to decide upon which specialism or some field of the occupation they wished to learn more about and in which to practice.

### *3.3.3 Building the Capacities Required to Engage and Be an Effective Practitioner*

It is now widely accepted that students experiences in work settings make particular contributions to their learning of occupational capacities in ways not achievable elsewhere, even those which comprise substitute versions (i.e. clinical laboratories in universities). Once acknowledged that the kind of social and physical setting contributes richly to what is learnt has led to an acceptance that different kinds of situations (i.e. educational and practice settings) have the potential and are likely to generate particular kinds of learning. As Rogoff and Lave (1984) proposed, activity structures cognition. That is, there is a cognitive legacy arising from the particular kinds of activities in which we engage. What is also implied and understood is that the particular experiences only offer potential contributions. It is individuals who decide how they engage with what is provided for them through their experiencing of and engaging in those activities. So, beyond the activities that are provided, is also how individuals engage with those activities. Nevertheless, and given that the kinds of knowledge that need to be learnt in occupationally-specific programs are directly related to what occurs in practice settings, these experiences become an essential element of building the capacities required for the effective practice of that occupation. Consequently, opportunities to engage in activities and interactions within practice settings are central to the development of occupational competence.

Moreover, it is important to issue a corrective here. Often, it is stated that experiences in educational settings provide access to theoretical knowledge and workplaces provide access to ‘practice’. However, concepts (i.e. theories) and procedures (i.e. practices) can be learnt in both settings, although different kinds of concepts and procedures are likely to be generated in distinct kinds of settings that offer different kinds of experiences (i.e. activities and interactions). Conceptual development is not confined to classroom experiences. Indeed, the development of rich conceptual knowledge is founded on securing the development of associations amongst concepts. These associations arise through episodes of experience that not only provide links, but also causal relations between or amongst concepts that arise and are identifiable (Groen and Patel 1988). Nevertheless, the development

of particular concepts and practices will likely be privileged in one or the other of the settings. For instance, concepts that might be hidden from observation or other kinds of engagement (e.g. the operation of a computer, insidious viruses) may need to be made accessible to students within a classroom environment, where this can occur through visual means, for example. However, other concepts, such as the impact of student behaviour on teachers' work, patient care in a busy nursing award, etc., are most likely to be experienced and enriched through practice-based experiences. Moreover, whilst many procedures can be both learnt and honed within work settings, it is also likely that there are some procedures which need to be learned away from those settings. For instance, the ability to apply dressings, give patients injections might best be initially learnt in situations which do not bring potential harm to patients (i.e. in clinical laboratories). Furthermore, procedural knowledge also comprises the ability to strategically use time and resources, and likely arises from a consideration of experiences from both kinds of settings (e.g. principles for practice, the requirements and realities of the particular circumstance).

Clearly, particular sets of activities can be experienced within practice settings and these are essential for students to develop the conceptual, procedural and dispositional occupational capacities required to practice effectively. Engaging in authentic work tasks requires the application of both conceptual and procedural capacities, and necessitates the development of abilities to monitor the undertaking of those tasks and to make adjustments and changes through monitoring and appraisal of performance. Then, there is the opportunity to practice. That is, to undertake activities a number of times to develop effective procedural capacities through rehearsal (Anderson 1982; Sun et al. 2001). These experiences enable learners to enact complex tasks and learn about the kinds of considerations of other activities, contributions, problems and even limitations to the procedures being utilized (Fitts 1964; Stevenson 1991). In this way, engaging in authentic experiences in practice settings can provide contributions such as a level of engagement with authentic activities and opportunities to engage in those activities that are rarely found in university settings. This includes opportunities to engage in these tasks frequently enough to develop both the strategic and the specific kinds of procedures to ensure their effective conduct (Anderson 1982; Ericsson and Lehmann 1996). However, it is important not to see practice settings as merely places where students come to apply and hone what they have learnt in university settings, or to learn the procedural dimensions of those occupations. Instead, practice settings are legitimate, salient and essential learning environments for those seeking to develop the capacities to effectively practice their selected occupation (Billett 2001b).

One approach for developing adaptable capacities is to provide learners with a range of experiences in different settings in which the same occupation is practised. A long-standing example of this approach is what used to happen in hospital-based nurse preparation programs. In those programs, trainee nurses are rotated through a range of hospital wards and they came to experience nursing in each of those kinds of wards. Those rotations expose trainee nurses to the range of nursing situations and provided experiences of nursing through different kinds of engagement in the practice of nursing. That is, they came to understand the ways in

which nursing is practised across wards with different kinds of patients, treatments and specialisations. Similar rotations are used within medical education.

However, beyond the provision of experiences in different kinds of work settings is also the need to allow students to share and understand their experiences and, in doing so, broaden their understanding of variations of practices to which the student cohort can be exposed. For instance, in the teacher education program, the students returning from different schools can share their experiences with other students to understand the different context, student base, aims and goals of the schools and practices that were adopted in those schools. Similarly, in the hospital-based nurse training model mentioned above, what might have happened to make those rotations even more effective is that on completion of each rotation, the trainee nurses might engage in activities to assist them identify what is canonical about nursing practice and what pertains to the particular ward that they had experienced, and the bases of those differences.

In sum, the educational purpose here is to provide experiences that likely develop robust understandings of the occupation and, thereby, apply those understandings and practices in the occupational context to which they are next engaged. Also, understanding something of the diversity of these experiences may ease the transition from education provisions to practice once employed.

### *3.3.4 Extending the Knowledge Learnt in University Settings*

Moreover, practice-based experiences can also be explicitly used to augment and enrich students' experiences in and learning through educational settings. They can provide opportunities for extending the knowledge that students have learnt during the university-based components of their programs. When provided with practicum experiences, engaged and interested students will likely work to identify, appropriate, and reconcile what they experience in practice settings with what they have learnt in the university-based elements of their programs. They will engage in trying to make sense of and reconcile those experiences as variously described as seeking to secure equilibrium (Piaget 1971), viability (Van Lehn 1989), typification (Schutz 1970) or ontological security (Giddens 1991). Hence, practice-based experiences provide a means for students to utilise, appraise and potentially develop further (i.e. extend) what they have learnt through university courses. That is. working within and extending their zone of potential development as Vygotsky proposed (Valsiner 2000). As advanced earlier, experiences in university programs alone are unlikely to develop the kinds and range of knowledge required for occupational practice. Consequently, it is necessary to access experiences that are able to secure this knowledge and practice settings can make specific kinds of contributions to students' learning. Although often largely seen as an opportunity to learn how to practice (i.e. developing 'know how'), it is not only procedural capacities that are realised through practice-based experiences. Concepts that are learnt through participation in taught courses can be given specific and grounded

meanings and form within practice settings (Raizen 1991). Procedures which were outlined, introduced and experienced in university-based activities (i.e. in lectures or workshops), can become personally and situationally-embedded through tasks that students enact and hone during their practice-based experiences. Hence, in this way, practice-based experiences provide particular contributions that can augment and extend the knowledge that was learnt within university-based experiences. All of this suggests is that it is necessary, not merely helpful, for students to have practice-based experiences during their higher education program, yet not all students have access to extensive practice-based experiences.

However, to realise the full educational benefits of the available practice experiences, it may be necessary to prepare students to participate in and learn effectively through those experiences, and then reconcile them after they have had those experiences. Both approaches set out above can be seen as efforts to bridge what has been learnt through university experiences to other circumstances (as elaborated in Chap. 7 – Curriculum Considerations: The Integration of Experiences). Through these bridging processes, the extension of the students' knowledge may well be achieved. The goals here can comprise: (i) procedural development – how to enact understandings and procedures that have been initially developed within the university setting; (ii) conceptual development – how to enrich and secure links and causal associations amongst concepts that have been learnt and subsequently experienced in practice settings; and (iii) dispositional development – extending and shaping their values and attitudes that underpin performance, such as those required for occupational practice. Of course, these arrangements will probably work best if the educational intents for what needs to be learnt are clear and their means of achievement can be supported by appropriate and well-focused curriculum and pedagogic practices.

Adequate preparation prior to students participating in practice settings can assist orientate them towards the particular kinds of learning to be realised. So, if the educational intent is to develop procedural capacities (i.e. ability to undertake tasks and achieve goals), consideration can be given to prepare students to a level of readiness that will allow them to engage in procedures within the workplace, albeit preparing a piece of writing as a student journalist, examining a patient, or applying a treatment or medical procedure for nurses and doctors. Hence, students might engage in preparatory work before their practice experience that includes developing the procedural capacities to perform some work tasks. Alternatively, if there is a focus on conceptual development, then students might be prepared to consider and identify how particular practice-related concepts are utilised in particular work settings. This preparation can extend to pressing them to identify associated factors and concepts that need to be taken into consideration for work-related activities and their potential impacts. For instance, this orientation might be about getting journalism students to understand the particular genres of writing required for specific kinds of publication, their audience and how this might shape their written work. Similarly, for medical or nursing students it might be about understanding the particular context of the health care setting and the patients and the range of factors which might shape decisions about the way a patient is

examined and for what purpose, and considering the range of factors which might shape decisions associated with treatments. Then, for the development of values, interest, affect etc., there may be a focus on identifying through observation and evaluations of how practitioners go about their work and in what ways these are consistent with or oppose the kinds of values and beliefs that students take into these experiences about their form of occupation. Consequently, consideration of the kinds of preparatory activity before the students go into the practice setting might be helpful for developing particular kinds of outcomes which might not be best learnt in the university setting.

Again, there are considerations for utilising and sharing students' post-practice experiences to extend what they have learnt during their practicums. For instance, it may be necessary for university educators to assist students make associations and linkages and interpret and understand the nature and outcome of their experiences in the workplace (this issue is also addressed in Chap. 8). It is noteworthy that re-engaging students post-practice experience was an educational intervention introduced in the 1920s within the cooperative education movement in North America (Grubb and Badway 1998). Referred to as the co-op seminar, these events were originally organised for students returning from their lengthy internships in engineering workplaces. These seminars provide opportunities for students to share their experiences with others but also quite explicitly to make links and associations between what they had experienced within engineering workplaces and what was intended to be learnt within their courses. Hence, engaging students after their practicums can be a productive way to both bridge and augment the two sets of experiences when directed towards specific educational purposes. Consequently, the ability of those teaching in higher education to support the integration of the two sets of experiences for the students and extend the learning from them is likely to be helpful in augmenting their learning. Through these means, a number of educational purposes can be served. These include: (i) assisting students make sense of what they have experienced, (ii) making explicit the links to what they are learning through the course work, which may not always be clear to them, and (iii) opportunities to share experiences and learning with other students.

This final point again has multiple purposes. Such sharing can open up students' access to a wider range of issues, circumstances and practices that comprise instances of their selected occupation and its requirements for performance than only relying on their own experiences. This access can be particularly useful for preparing students to enter practice upon graduation, because they may subsequently have a broader understanding of the range of circumstances into which they may end up working and be seeking to perform as nascent practitioners. In the more short-term, through the sharing of experiences, students can also come to make sense of their own experiences relatively and in comparison with what their peers have encountered. Those who have had negative or unproductive experiences can learn from others and, perhaps be reconciled about any negative experiences, as was the case in the Journalism project. A more detailed consideration of these strategies is offered in Chap. 8 – Pedagogic Considerations: Principles and Practices.

### 3.3.5 *Orientations to Circumstances Where Occupations Are Practiced and Their Tasks Requirements*

Another important educational purpose is to orientate students to the physical and social environments in which the occupation is practiced and the kinds of tasks they will perform in those environments. That is, to assist students to be prepared for and orientated to the kinds of physical and social environments in which they will undertake practicums and the tasks they will perform and, then, ultimately engage in their occupational practice upon graduation and securing employment. For many students, these environments and the way work tasks are actually undertaken may be wholly or largely unknown. Hence, they may not be familiar with or understand essential aspects of work performance, such as how the occupational practice is conducted, how this practice interacts with others, or the boundaries and demarcations among different occupations as well as overlaps in that work and how its particular requirements are shaped by specific circumstances. Consequently, opportunities to engage in practice settings can assist another kind of development that is difficult to generate within university settings. As a result, understanding something of the range of the circumstances in which occupations are practiced, their particular emphases and specific performance requirements, is likely to be helpful for students to engage productively in their practice experiences. These kinds of experiences can address a number of important purposes such as allowing students to identify which particular specialism or field is that which suits their sets of interests and capacities. In addition, it can assist by their experiencing and developing a range of capacities that are central to the practice of the occupation, but might be seen as being general workplace competencies that are not explicitly taught or are even not easily able to be learnt within a university setting. For instance, these experiences can assist develop capacities such as the ability to communicate, work effectively with others, take responsibilities, and understand the ways in which factors associated with particular kinds of locations shape the requirements for performance and what actually constitutes the occupation in practice.

One very practical reason why such orientations may be essential is that, often, the duration of students' practicums can be quite short, particularly where supervised practicums are provided at a high cost. Therefore, given the importance of maximizing the outcomes from periods of supervised engagement in practice settings, it is necessary to provide an orientation so students are as prepared as possible to engage productively in those practicums. Through such orientation, students may well be best placed for these experiences to be rich and effective learning interludes, rather than being overwhelmed. In one project, a strategy was adopted to assist students to become familiar with the particular setting in which they would undertake their clinical practice, because their periods of clinical placement were relatively short (i.e. only two weeks in duration). Hence, it was helpful for students to be aware of the physical layout and the kinds of treatments undertaken on those wards and the kind of medications that would likely be prescribed etc. The idea here is one which is familiar to educational science: the

notion of advanced organizers (Ausubel and Novak 1978) that prepare students and make them ready to engage effectively with new experiences. Essentially, having some bases to comprehend and then organize what they will encounter in workplace practices stands as a means to prepare them for what they will subsequently experience and permits them to engage and learn in effective ways.

In sum, the educational purpose of orienting students to the circumstances in which they will apply what they have learnt highlights the importance for adequately preparing students to understand and maximize the learning potential of these experiences. Before entering such environments, it is likely to be helpful to know what they will be doing, with whom they will interact, and in what ways the work is likely to be undertaken. Students might be encouraged to speculate the responses to these concerns before being advised by a teacher. Such scenario prompting, is potentially helpful for engaging students in ways that can assist optimize their experiences in practice settings. For instance, in the example above about short periods of time in practice settings, students might be asked to investigate the kind of setting in which they are to engage in practice, to understand its particular focus, emphasis, activities and perhaps even those who are engaged within the practice setting. All of this preparatory work assists students generate some bases to make sense of what they will encounter in these settings. Moreover, these processes can assist students develop robust understandings about their occupational practice which may be helpful in them engaging in the particular practice setting they are employed post-graduation and, subsequently, when dealing with different kinds of activities and interactions across their working lives. That is, they will have insights into how practice occurs in other instances of practice, not just the one in which they are engaged.

### *3.3.6 Meeting Requirements of Occupational or Professional Licensing*

Finally, there is an increasing need for students to meet the requirements of occupational or professional licensing through designated activities in practice settings. Many, and increasingly professional bodies and registering authorities require nascent practitioners to have undertaken periods of practical experience, including a designated number of days or hours of practice, before they can be recognized through professional bodies or agencies that licence individuals to practice particular occupations. For instance, in the study of student midwives (Sweet and Glover 2011), it was necessary for midwifery students to have undertaken over 30 follow-throughs or continuity of care experiences, to be licensed as a midwife. ‘Continuity-of-care’ experiences comprise a student midwife following a birthing mother through the process of pregnancy and giving birth to their child. These activities engage students in observing and shadowing birthing women through the range of medical appointments, social welfare assignations and assessments and

problems that they confront and also the process of assisting the birthing mother through each stage of the birthing process, including the tasks of withdrawal, once the baby has been born. Consequently, students are required to meet this occupational requirement of having participated in a designated number of follow-throughs before they can be licensed to practice. Similarly, engineering students need to undertake substantial periods of work experience to be licensed as engineers by their professional body. Indeed, one fellowship project sought to identify how the experiences of students who were working very remotely from their university could have their practice-based experiences supported and made purposeful through engaging with a lecturer and other students (Engineering 2 project). Another project was concerned about how best the demands of work experiences could be organised for students, particularly those who were not already employed in the engineering work (Engineering 1 project). All students needed to fulfil the licensing requirements of professional recognition and certification, regardless of their employment situation. In other situations, it is necessary that students have access to a broad set of experiences for them to both complete their course and licensing requirements (Sweet and Glover 2011).

So, a range of quite specific and distinct educational purposes have been advanced here for engaging students in practice-based experiences associated with their understandings about and preparation for their selected occupation. These include appreciating something of the range of instances or variations in this practice, extending what has been learnt in the university setting through engaging in experiences in practice settings. The purposes can also include understanding something of the capacities that need to be learnt for the effective enactment of the occupation. This list also embraces the ability to engage with experiences from a range of the kinds of settings either personally or vicariously, in which the occupation is enacted, and the opportunity to engage in experiences that build capacities to be effective in that occupation. Then, finally, the list acknowledges the need for engaging in work experiences that can meet the requirements of licensing authorities and/or professional bodies.

## 3.4 The Necessity of Providing and Integrating Practice Experiences

Throughout this chapter, it has been proposed that there are a range of important educational purposes aligned with providing and engaging students in practice-based experiences and then reconciling those experiences to promote occupational preparation and prospects for students being ready to secure smooth transitions to professional practice. These experiences can be maximised when they are experienced by students with particular educational intents in mind. These purposes extend to informing students about particular occupations, what they comprise when practised, how those practices likely differ according to circumstances, and

providing students with the procedural capacities to be effective in those practice settings. These also encompass preparing students to be proactive learners, capable of exercising critical, but productive, agentic learning. Moreover, the generation of these capacities likely arises through including and integrating episodes of practice-based experiences within the totality of higher education curriculum. To offer these kinds of experiences and realise their potential benefits, mature relations between academics and practitioners, and between academic institutions and practice settings are likely to be helpful. Such relationships are difficult to generate and sustain in realising these transitions, given the different imperatives of educational and practice-based settings, and tensions that can arise between their distinct goals and priorities. The key challenges for higher educators are to overcome existing orthodoxies that resist embracing learning through practice as being legitimate and productive, and to support and acknowledge its contributions and understand that effective curriculum and pedagogy in practice settings are constructed differently from those in educational settings, albeit shaped by consonant concepts.

Consequently, given the importance of being intentional in educational purposes and practices, an important platform for decision-making is what constitutes these two kinds of experiences and how these can be integrated effectively or reconciled within higher education programs and activities. Such a platform requires a clear account of what constitutes such an integration or reconciliation of those two sets of experiences. Consistent with what has been proposed above, in the next chapter some considerations of how we should conceptualise the integration of those experiences is advanced.

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# Chapter 4
# Conceptions of Integrating Students' Experiences

## 4.1 Integrating Experiences in Higher Education and Practice Settings

The provision of tertiary students' learning experiences in both educational and practice settings (i.e. workplaces) has well served societal and personal needs for developing occupational skills and capacities. These arrangements have likely been the longest standing in medical and legal education (Elias 1995). However, as noted in earlier chapters, the provision of workplace-based experiences has been extended in more recent times to a growing range of higher education programs, particularly those with a specific occupational focus, such as in the co-operative education movement in North America (Ricks 1996). There are also the now well-established provisions of these experiences in teacher and nurse education programs, and increasingly across many other occupations, particularly in, but not restricted to, preparations for occupations in the health-care sector. Yet, whilst the provision of workplaces experiences has now become widely adopted in higher education programs, it seems the intentional integration of the two set of experiences for specific educational purposes is not commonly practised. Indeed, whilst explicitly emphasising the provision of work, many such efforts appear less concerned with the integration of those experiences. As noted, deliberate attempts to integrate work experiences in contemporary higher education were first advanced within the Northern American cooperative education movement. These were through the use of specific curriculum and pedagogic practices of the co-operative education seminar to achieve this outcome (Grubb and Badway 1998). However, the largely governmental reforms driving imperatives to include work experiences in higher education programs are failing to adequately account for and enacting arrangements that can secure such integrations of students' experiences.

There are also diverse explanatory accounts of what constitutes such integrations, and how they might be best realised within educational programs (Eames and Coll 2010; Tynjala 2008). The differences in emphases within such accounts make



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it difficult to identify the most appropriate curriculum and pedagogic practices that should be enacted to secure the integration required for achieving particular educational purposes (Grollman and Tutschner 2006; Stenstrom et al. 2006). Consequently, this chapter seeks to identify and articulate accounts of what might constitute such an integration of experiences and learning across both settings from two distinct perspectives, and then attempt some reconciliation of those perspectives. Existing conceptions and theories of learning provide helpful insights into how the integration of experiences across educational and practice settings might be explained in promoting learning. Well traded concepts such as 'transfer' and 'adaptability' provide some bases to explain the integration process from a cognitive perspective, when these are seen as taking knowledge from one situation and applying it to another. Yet, this kind of transfer is often used to refer to quite novel experiences, and held to be quite limited and occurring infrequently given its demanding and problematic nature (Stevenson 1991). Indeed, the perceived lack of transfer of learning from experiences in educational institutions is one justification why there is a growing interest in providing practice-based learning experiences in educational programs (Organisation for Economic Co-operation and Development (OECD) 2010; Raizen 1989). More to this, however, the process of integrating educational experiences arising from the two diverse physical and social settings is probably not best conceptualised as a process of transfer, given the implications of transferring something from one place to another, as Lave (1991) critiqued. Instead, it is more closely associated with students' learning arising from them negotiating and reconciling what they have experienced across two distinct kinds of physical and social settings (Billett 2013). These negotiations and reconciliations necessitate accounting for contributions to learning arising from engaging in distinct kinds of activities and interactions afforded in each of these settings, on the one hand, and how students are able to participate in them, and bases through which these processes of reconciliation arise as learning for students, on the other.

However, few explanatory accounts exist about what constitutes such integrations and, therefore, how they might be best enacted as part of the curriculum and engaged with by learners (e.g. students, workers or apprentices). The integration of these two sets of experiences can be explained in a number of ways. One is to consider the qualities and characteristics of each physical and social setting, and as objective entities, and identify their potential contributions to students' learning, and reconcile and aggregate these experiences. Another focuses on individuals as meaning makers, and the exercise of their reconciliation of what they encounter and develop further through their experiences across these settings. A third explanation is a dualistic account that views the integration of experiences as processes through which each setting affords learners' particular experiences and they then engage with, construe and reconcile those experiences as directed by their interests, capacities and cognitive experience. This account is referred to as being socio-personal. These explanations are advanced, elaborated and discussed as a means of understanding the process of integrating those experiences and how it might be promoted in higher education. However, before that it is necessary to

set out and restate, firstly, the current emphasis on work-related experiences in higher education, and also the associations between those experiences and students' learning.

## 4.2 Higher Education: The Growing Imperative for Work-Based Experiences

As elaborated in Chap. 2 (i.e. Purposes of Higher Education: Contemporary and Perennial Emphases), contemporarily, a key imperative is for higher education students to learn applicable occupational knowledge from their experiences in both education and workplace settings. This requirement is apparently sustained by beliefs that each of these settings has the potential to offer distinct contributions to students' learning (Tynjälä et al. 2003). Concerns about school leavers' abilities to secure employable skills through their experiences in educational programs bound to schools and schooling have driven the OECD *Learning for jobs* (OECD 2010) report. This report recommends that workplace learning experiences should be widely available for young people to develop these kinds of capacities and thereby support their transitions from schooling to further study or work. Students not able to access these kinds of experiences are held to be disadvantaged through not being able to develop the capacities required for the transition to work and performance in work life. For instance, Symonds, Schwartz and Ferguson (2011) claim that while these options are widely available to those being prepared for high status professional occupations in the US, they are largely unavailable to students in vocational education programs, who are in greater need of such experiences and their outcomes. So, there is a widening and growing interest for these kinds of arrangements to be enacted across tertiary education provisions (i.e. university, technical and vocational education) to meet the goals of graduate employability. With increased emphases on occupationally-specific-focused programs within higher education have come associated expectations that graduates from these programs should be able to move smoothly and effectively to practice their chosen occupation (Department of Innovation 2008; Universities Australia 2008). As noted, such expectations are now leading to increasing numbers of university programs requiring students to engage in work or practice-based experiences[1] as part of their degree. This trend is evident in the United Kingdom's Foundation Degree initiative, through work-integrated learning (WIL) and service learning provisions in Australian universities, and co-operative education programs of different kinds elsewhere in community colleges, polytechnics and universities in New Zealand,

[1]Not all of these experiences are located within physical workplaces, hence the use of the term practice-based experiences. For instance, midwifery students' continuity-of-care experiences arise through the students engaging with birthing women across their prenatal phases and these interactions do not occur in birthing workplaces.

Canada and the United States (Coll and Zegwaard 2011). Such workplace learning experiences are referred to variously as teaching practicums, clinical placements, industry placements, cadetships, internships etc. Yet, these workplace experiences differ widely in form, purpose, duration and circumstance, and the degree by which they are aligned with and supported within educational institution and workplace settings.

As already noted, many of these arrangements have long been part of higher education provisions in disciplines such as medicine, nursing, education and law. Now, higher education students across a range of disciplines are engaging in these kinds of experiences with expectations that they will become key elements of their program of study and be effectively integrated into that program. Consequently, commensurate effort and resources are being expended by both higher education institutions and their students to secure and utilise workplace experiences as essential elements of their higher education program (Tynjälä et al. 2003). However, as noted, beyond providing students with access to practice-based experiences, is the need for the learning arising from those experiences to be effectively utilised within students' study programs. Yet, beyond the provision of workplace experiences, achieving the proposed goals likely requires intentional structuring of students' experiences and the use of particular pedagogic practices to make explicit the links between what is learnt in both settings and their alignment with what the students are supposed to be learning to meet their programs' objectives (Billett 2009c). The intentions of securing smooth transitions to practice and 'job ready' graduates requires students to actively and constructively engage in utilising and reconciling their experiences in making associations between what they experience in the two settings. So, the allocation of both institutional effort (i.e. organisation of experiences and their enrichment), and that by students, will need to be optimised for students to effectively engage in learning through both settings. However, such efforts need to be guided by clear conceptualisations, so that investment in educational resources and students' efforts are well-directed. But fundamentally, there is a requirement to consider the provision of experiences, on the one hand, and students' engagement with them on the other.

## 4.3 Students' Experiences and Learning

A starting point for conceptualising the utilisation and integration of learning experiences is the premise that learning arises through individuals' experiencing (Gardner 2004; Valsiner 2000). That learning is nothing other than change in what individuals know, can do and value arising through that process of experiencing. Through ongoing interactions between individuals and the social and physical world that they encounter and engage with, we learn continually through these everyday experiences in a way described as being micro-genetic (i.e. moment by moment learning). These experiences are constituted by what is suggested to individuals by these worlds beyond the skin (Wertsch and Tulviste 1992), on the one hand, and how

they come to construe those experience, engage with and change as a result of that experiencing, on the other (Billett 2008). That change in individuals (i.e. learning) can comprise the verification, reinforcement, refinement or further honing of what individuals already know, can do or believe: i.e. they know, can do and value. This kind of learning arises continually through individuals' conscious engagement with the world beyond them through micro-geneses (i.e. moment-by-moment learning) as they experience it and through everyday activities and interactions that are familiar or routine for them (Lee and Roth 2005). Alternatively, by degree, these micro-genetic changes can comprise new understandings, beliefs and ways of doing things through engagement in experiences that are novel to individuals. In particular, these novel experiences have the capacity to extend their knowledge in particular ways and through specific kinds of experiences that would not have occurred if they not had that those experiences and engaged in them in particular ways (Billett 2003).

So, individuals' experiencing and learning co-occur, as they comprise the consonant if not the same cognitive processes. In this conception of learning through experience, what is often referred to as transfer or adaptability arises both through what constitutes for individuals routine experiences comprising 'near' transfer (i.e. adapting what is known to something similar to what is known) and with non-routine experiences comprising 'far' transfer (i.e. adapting what is known to something which is quite dissimilar from what is known) (Voss 1987). All of these processes, albeit labelled 'learning', 'transfer', 'adaptability' or 'integration', have common qualities of individuals experiencing something, aligning and reconciling what has been experienced earlier (i.e. they know) and with a legacy of change in their knowledge and ways of knowing (Billett 2013). These concepts are most commonly aligned to the human cognitive processes of perceiving, acting and introspection (Barsalou 2008). Importantly, such experiences and learning (i.e. experiencing) are shaped by the particular kinds of experiences individuals have (Billett 2009a) and by their person-dependent bases for experiencing and learning, as premised on earlier or pre-mediate experiences (Valsiner 2000). Put simply, what for one individual will be a novel experience, for another is a routine experience, because of differences in what they have experienced and learnt previously. So, for the former, the legacy can be the generation of new insights or capacities, whereas for the latter, a reinforcement or refinement of what they already know.

Hence, the experiencing and reconciliation of what is encountered in two physical and social settings is shaped by individuals' ways of knowing and cognitive experience, albeit in person-dependent ways and dialogically (Akkerman and Bakker 2011). Thus, the linking of experiences in educational and practice settings is likely to be quite personally-distinct across a cohort of students. For instance, experienced enrolled nurses entering an undergraduate nursing degree often have very different bases for construing and constructing knowledge about nursing (their personal experience) from what they experience in the university program, than school leavers entering the sane degree program without clinical experience (Newton et al. 2009b). Moreover, how each cohort of students came to associate and reconcile what has been experienced and learnt in each setting was also person-dependent, by degree, because of the particular experiences they had

had prior to enrolling in their nursing degree (Newton et al. 2009c). For example, some had undertaken work experience in different kinds of clinical settings, and engaged in a range of health-related tasks. One student, who was expelled from school for misbehaviour was made by his parents to volunteer in an aged care facility. This experience led to him wanting to become a nurse. Another, again, had quite different motives. His girlfriend was a nurse and he realised that she had secure, well-paid work that was highly mobile and was far better paid and secure than his own work. So, his motives were associated with securing relatively well-paid and secure work, not the caring aspects of nursing that was central to many other students' espoused reasons for wanting to nurse. Hence, while educators may have specific intentions within educational programs and enact actions to provide students with particular kinds of experiences to achieve those intentions, these will always be subject to individuals' construction of those experiences, as was intended. The social phenomenologist Schutz (1970) proposes:

> Within the common environment, any subject has his particular subjective environment, his private world, originally given to him and him alone. He perceives the same objects as his partners but with adumbrations dependent upon his particular Here and his phenomenal Now. (sic) (Schutz 1970, p. 165)

This process of learning as associating and reconciling experiences is helpful in explaining what might constitute integrations between experiences in education and practice (i.e. workplace) settings. That individuals may attempt and, by degree, be successful in linking what they already know, can do, and value, with what they experience and seek reconciliations between them is well established in the literature. For instance, the genetic epistemologist Piaget (1968) referred to individuals seeking to overcome disequilibrium (i.e. an experience they cannot readily accommodate with what they know, can do and value) by seeking to secure equilibrium through reconciling what they know, can do and value. More recent constructivist accounts, such as those of Van Lehn (1989) and von Glasersfeld (1987), refer to a similar phenomenon they term as viability: the process individuals use to render what they experience viable in terms of what they already know, can do and value. Also, as a social phenomenologist, Schutz (1970) analogously refers to the process of typification in which new experiences are ordered on the basis of how individuals have come to already typify what they experience with what they know. Seemingly similar also is Vygotsky's account of subjectification – of individuals translating social experience subjectively (Papadopoulos 2008). Analogously, again, Giddens (1991), a sociologist, refers to individuals seeking to realise ontological security through reconciling their encounters with what is suggested by the social world. Finally, the strongly socially-oriented learning theorist Gergen (1994) refers to individuals drawing upon their personal histories and understandings that arise through it to make sense of what they experience in the present moment. He proposes that:

> As people move through life, the domain of relationships typically expands and the context of any given relationship typically changes. In effect, we are continuously confronted with some degree of novelty – new contexts and new challenges. Yet our actions in each

> passing moment will necessarily represent some simulacrum of the past; we borrow, we formulate, and patch together various pieces of preceding relationships in order to achieve local coordination of the moment. Meaning at the moment is always a rough reconstitution of the past, a ripping of words from familiar contexts and their precarious insertion into the emerging realisation of the present. (Gergen 1994, pp. 269–270)

These accounts are quite consistent, despite arising from distinct theoretical traditions. They are premised on the idea that humans are active meaning makers and constructors of knowledge that arises through their experiencing (i.e. microgenetically), albeit premised on what they have previously experienced and learnt. Yet, the degree by which individuals are compelled to secure equilibrium, viability, typification or ontological security and exercise their effortful engagement to do so, are ultimately premised on their interest, desire and energy (i.e. their personal epistemologies).

The process of associations and reconciliations required for the integration of experiences in education and practice settings seems consonant with what is described in these conceptual accounts of learning (e.g. securing equilibrium, viability, typification, subjectification) and comprise a negotiation between individuals' cognitive experience (Valsiner 2000) and what is experienced. What is experienced is projected through and by the suggestions, norms and forms of the physical and social world. It follows, therefore, explicating the integration of experiences in educational and practice settings requires accounting for the active process of students making associations and realising reconciliations between what they know and experience. In this way, the process of linking and reconciling experiences in different settings – referred to here as integration – seemingly comprises a commonplace process of human meaning-making. Through a consideration of boundary crossing, for instance, (Akkerman and Bakker 2011) conclude that such negotiations are ubiquitous across the range of social practices. Hence, on its own terms, there is nothing particularly unusual about the cognitive processes underpinning the integration of experiences across different settings. However, to be effective in achieving particular educational outcomes, such reconciliations may need to be supported and guided by others, and engaged with effortfully by those who are learning (e.g. students). Those physical and social situations are not restricted to educational and clinical settings nor is support limited to experts in those settings. In studies of nursing (Newton et al. 2009a), medical students (Richards et al. 2013) and novice doctors (Cleland et al. 2014) it was found that students organised their own support groups to assist their studies and bulwark against difficult and confronting experiences they encountered in healthcare settings. Similarly, the places where medical students and junior doctors were accommodated provided opportunities and forums for experiences and outcomes in healthcare settings to be discussed, elaborated and moderated (Cleland et al. 2014). Yet, again, these experiences were shaped by whom individuals came to prefer to engage with or, for instance, with international students, circumstances ordered in particular ways. That is, international students often had particular issues (e.g. English competence) and addressed these collectively, but in person-particular ways

(e.g. level of English competence, cultural dissonance). So, these interactions did much to support the reconciliation of experiences in both practice and educational settings.

It follows that because these processes of associations and reconciliations are person-dependent and, therefore, not uniform, predictable or engaged with consistently, it is important to identify factors that make them invariant. The diverse accounts referred to above commonly emphasise personal meaning making as mediated by individuals' agency, thereby privileging individual intentionality and effort (Salomon 1997; Valsiner 1998). Students' meaning-making, for instance, may not be directed towards the intended educational outcomes or what educators are directing them towards. Clearly, individuals need to be selective about what they engage with as the social world demands and suggestions are so multi-fold that it is necessary to rebuff much of what is suggested to them (Valsiner 1998), to maintain what is variously referred to above as their equilibrium, viability, typification and subjectification. Indeed, as Baldwin (1894) pointed out long ago, individuals' engagement with the world beyond them is undertaken selectively because of such personal imperatives. Much more recently, Glenberg, Schroeder and Robertson (1998) note how individuals exercise that control by averting their gaze (i.e. turn their head away) when actively seeking to exclude unwelcome social suggestions such as when they are engaged in cognitively demanding tasks and wish to remain focussed on those tasks uninterrupted by other suggestions. So, individuals likely direct their efforts and intentionality when linking and reconciling what they are experiencing or have experienced, and do so selectively. In sum, the integration of experiences presents as a process of forming associations between what people know and what they experience from suggestions of social and/or brute facts and then reconciling them in personal-particular ways. Such an account is not meant to represent a division between social and individual, or social suggestion and cognitive process. Instead, individuals' pre-mediate experiences, micro-geneses and ontogenetic development (i.e. across their lives) arise through socially derived experiences. Indeed, to avoid these considerations descending into simple binaries of individual and social factors as underpinning such a process, it is important to be reminded that the individual is the personification of the social, not the opposite of it. That is, our personal histories shape who we are, what we know, can do and value, because these arise from earlier experiences.

## 4.4 Accounts of Integration of Experiences

To advance this case more thoroughly, and elaborate distinctive and different accounts of this process of integration, the following sections outline three explanatory accounts of this process. Firstly, an account of integration based upon reconciling the contributions of distinct physical and social settings (i.e. the educational and the practice setting) is advanced. It privileges socially-situated-based explanations of integrations. Secondly, a consideration of integrating experiences from a personal

or phenomenological perspective is advanced. This explanation privileges personal meaning-making. Thirdly, an explanation proposing the process of integration as a duality comprising a reconciliation and accommodation of these two explanations into a socio-personal account is advanced. The purpose here is to present some ways in which these integrations are considered in contemporary accounts, and advance through the third option a more integrative and comprehensive account of such integrations and how they might be supported within higher education programs.

### *4.4.1 Situational Account of Integration*

Scientific and also lay discourses make distinctions between learning arising from experiences in different kinds of social settings. Vygotsky is held to have suggested that scientific and everyday understandings arise from particular experiences: i.e. those from being taught in school and, respectively, in situated everyday practice settings (Smagorinsky 2011). Indeed, this kind of sentiment is also exercised through the lay explanations and distinctions between the consequences of engaging in educational settings and those in which people engage in and learn other kinds of socially derived activities (i.e. without instruction). Sometimes, the latter circumstances are ascribed particular qualities. Most commonly these are described as being 'formal' or 'informal learning settings' (Marsick and Watkins 1990), where formality is marked by the organised provision of experiences guided by teacherly activities intended to secure pre-specified outcomes. Along with this distinction between settings and what is generated through participating in them, comes those associated with particular outcomes arising from them. That is, theoretical knowledge arising from schooling setting and practice or procedural knowledge from experiences in workplace settings. Much government policy and educational practices associated with the provision of work-based experiences seem based on such premises. That is, distinct kinds of learning processes occur and outcomes arise from experiences in each of these physical and social settings. Consequently, this rationale proceeds educationally along the lines that students require experiences in both of these settings (i.e. school and workplace) to access their particular contributions (i.e. theory and practice, respectively) and these different kinds of learning need to be brought together or integrated in some way.

Certainly, the particular qualities that comprise the physical and social settings where individuals engage and experience, as well as the kinds of activities and interactions they afford are held to potentially make specific contributions that shape individuals' thinking, acting and learning and in particular ways (Barsalou 2008, 2009; Billett 2003). The kinds of activities individuals engage in are held to shape or structure their cognition (Rogoff and Lave 1984), because the goal-directed activities and interactions afforded by specific settings potentially have particular cognitive legacies (Billett 2003). Accounts viewing these settings as different social contexts and where the processes of integration are held to be one of contextualisation and de-contextualisation inform this perspective (Griffiths

and Guile 2003; Guile and Young 2003), thereby emphasising the socially-situated contributions to individuals' learning. In a similar way, those accounts that view these settings having physical or societal boundaries, including artefacts that situationally-mediate processes that might support the integration of experiences and learning (Akkerman and Bakker 2011, 2012; Tuomi-Grohn and Engestrom 2003). Hence, these accounts can be seen as emphasising the social and setting in which people act and their contributions to cognition, including the integration of experiences that are seen as embedded in particular social and physical settings.

Sharing knowledge secured in such settings requires processes to extract (i.e. de-contextualise, excise it from within socially constructed boundaries) and then apply it in other settings (i.e. re-contextualisation, boundary crossing). Indeed, accounts of boundaries, boundary objects and boundary crossing, have recently emphasised learning processes negotiated across two physical and social settings and individuals placements within and on boundaries of such settings (Akkerman and Bakker 2011). Current contributions from cognitive science also give credence to such accounts by suggesting that cognition is premised on multi-modal engagements (i.e. perceptual, motor, and introspective states) and grounded in particular experiences, rather than being amodal representations of what has been experienced (Barsalou 2008). Hence, within these accounts, individuals' representations of activities are generated by the physical and social contexts in which they are located, experiencing and engaged in sense-making. Therefore, each of these settings needs to be viewed as being construed as physical and social environments multi-modally, not merely as social settings where particular activities occur.

As noted above, it is often claimed that educational settings privilege the generation of theoretical knowledge and practice settings generate procedural capacities (i.e. practice). Yet, a more plausible proposition is that the conceptual, procedural and dispositional knowledge of particular kinds will be developed from particular kinds of experiences, and, in both of these kinds of settings. Hence, although conceptual knowledge, comprising facts, concepts and propositions, are often aligned with theory, there is little evidence to suggest that the securing and development of this kind of knowledge is restricted to being learnt through experiences in educational settings alone. It also has been shown to arise through practice-based experiences (Billett 2001b).

It follows, therefore, that the development of conceptual knowledge (e.g. theory) is not restricted to experiences in educational settings (Brown et al. 1989; Rogoff and Lave 1984; Scribner 1984). It arises through everyday access to and engagement in both kinds of settings, and likely more. The process of engaging in activities and using a range of related concepts, importantly, can lead to understanding associations amongst these concepts. It is the repertoire of experiences that individuals engage in practice settings that can lead to the development of rich associations between propositions that are central to higher order conceptual knowledge (i.e. deep conceptual knowledge) as causal links and propositional associations that characterise depth are built through these kinds of experiences and over time (Roth and Roychoudhury 1993). Thus, experiences in practice settings such as engaging in goal-directed activities, monitoring performance and appraising activities can be

generative of factual concepts, as well as deep conceptual knowledge. So, proposing that theory (i.e. conceptual knowledge) or higher order conceptual knowledge arises only from engagements in academic settings is erroneous and misleading (Billett 1994). Conversely, the development of procedural capacities – being able to do things – is also not restricted to what can be learnt in practice settings (Anderson 1982). The processes of engaging in activities, improving performance through practice and grasping opportunities for refinement also occur in educational settings, when opportunities to repeat activities and improve on them are provided. Certainly, there are inherent limitations associated with learning through experiences in practice or educational settings alone, such as whether understanding can arise when concepts and purposes are not able to be made explicit or accessible (Billett 2001b).

Some of these limitations can be redressed by experiences in educational settings, and vice versa. Hence, it is proposed that drawing upon and combining the contributions likely afforded in each kind of setting, may help to secure the complementarities across these experiences that will likely promote the learning of knowledge that is applicable in work settings. Indeed, this outcome appears to be the rationale behind much of the contemporary interest in providing tertiary education students in occupationally-specific programs with work-based experiences. That is, to overcome the deficits of students only having 'school'-based experiences that fail to develop the kinds of capacities that permit a smooth transition to practice upon graduation (Department of Innovation Universities and Skills 2008; OECD 2010). However, the current interest in providing workplace experiences may also lead to heightened expectations by government, employers, professional bodies and, importantly, students, that having provided experiences in practice settings will be sufficient for effective transitions to and performance in occupational practice (Billett 2009c). That is, those experiences will generate learning that will be applicable to any circumstance where the occupation is practised. In this way, it will be applicable to wherever higher education students secure employment after graduation. Yet, this expectation may be unrealistic. The circumstances where graduates find employment may be quite different from those they experienced during their studies, including those in work experience settings. That is, these practice settings and their experiences may be quite distinct and not permit the kinds of boundary-crossing or re-contextualisations that are required in the circumstances where they find employment upon graduation. The degree by which contributions of two sets of experiences will collectively address this need and somehow limit the weaknesses of the other through generating the knowledge required for effective practice cannot be known. And, even if known, securing this transition may be quite difficult to manage. For instance, students even when given access to the same set of activities in the same setting, are likely to engage in and have different kinds of experiences, will learn distinct kinds of outcomes and, consequently, where settings are different they will likely provide particular combinations of experiences and learning that will be both situationally-specific (Billett 2001a) and distinct from each other.

It follows, therefore, despite an emphasis on situations and processes of contextualisation and re-contextualisation, boundaries and boundary-crossing and even

typification, all of these conceptions are premised on how individuals are able or interested in making sense of what they experience. It is individuals, in this instance – higher education students – who have to engage in those contextualising processes, identify and respond to boundaries, of which they may or may not be aware, and whose typifications might be highly idiosyncratic. That is, bases for making sense, identifying contributions and organising knowledge derived from beyond the skin (i.e. outside of the person from contributions and suggestion of the social and brute worlds), are likely to be organised, recalled and utilised in personally-dependent ways. Hence, there can be no certainty by those organising and enacting these experiences for students. Certainly, they will also need to make judgements about how these outcomes lead to the development of the canonical occupational knowledge and provide bases for its application to particular workplace settings, which may not be known at the time of the preparation. The point here is that integration of experiences in these accounts goes way beyond linking theory to practice, and emphasises far more the use and reconciliation of what is experienced in potentially distinct social and physical settings to build and extend individuals' knowledge arising from and being reconciled for those settings.

In this account of integration, the 'enacted curriculum' – what is enacted for students to learn from – is a key educational focus (see Chap. 7 – Curriculum Considerations: The Integration of Experiences). That is, the main concern is with the organisation of a set of experiences across both settings and curriculum and the means by which integration of these experiences would realise the outcome of developing occupational capacities, including understanding how these capacities might be applied across some of the range of settings in which graduates will be expected to practice. From this perspective, the focuses on the kinds of experiences these settings afford, and assumptions about particular contributions from activities and interactions in both education and practice settings together provide the means for accessing the knowledge required for effective performance. Therefore, in these situated accounts, the integration of these experiences is founded on drawing upon the distinct contributions of these settings as contexts, albeit shaped within particular kinds of boundaries and seeking associations, linkages and reconciliations across those situational boundaries and contexts. Consequently, worthwhile integration comprises those experiences collectively providing access to what is being learnt in both settings and then reconciling them in ways that secure the knowledge required for effective practice, including negotiating the boundaries that ascribe these contexts.

In this way, situational accounts emphasise social and physical environments as objective entities that make particular contributions and elicit particular kinds of outcomes. However, left unexplained in these accounts is how the reconciliations of experiences occur. That is, how students construct experiences and reconcile them when crossing boundaries (if they can recognise them) and re-contextualising what has been experienced. It also raises the procedural concern of the sufficiency of just providing two sets of experiences per se for generating the kinds of knowledge required for effective occupational practice. Instead, there might be the need to assist with the integration of those experiences. Moreover, such an account tends

to de-emphasise the subjective and cognitively unconscious bases through which individuals construe and construct knowledge (i.e. learn), albeit within one setting, across settings, or the task of integrating and reconciling experiences across two settings. So, whereas it focusses on the enacted curriculum it does not speak directly to most important of curriculum concepts: the experienced curriculum (i.e. what learners come to construe and learn from those settings). Consequently, a consideration of how individuals construe and construct knowledge in particular settings is also warranted to inform the process of their integration.

### *4.4.2 Personal Account of Integration*

An alternative starting point for conceptualising engagement in and integrating experiences across educational and practice setting is to consider this process primarily from the learners' perspectives. This conception emphasises humans as being active meaning-makers and constructors of their knowledge from what they experience. The conceptual heritage here is found in explanations provided by constructivist approaches, both more social and individual orientations, as well as phenomenology. Both orientations of constructivist explanations acknowledge the central role that humans play in making meaning from what they experience, although they differ in the degree by which that it is shaped by individual contributions or those from the social world. Hence, students' process of experiencing in both settings is central to explaining the process of integration and learning, from perspectives emphasising the personal. These perspectives, therefore, hold that there can be no guarantee that what is afforded learners by a particular educational or practice setting will be appropriated (i.e. 'taken up') by them (Luria 1976) or learnt what those suggestions of the social world intend. Learners may accept or reject what is suggested to them (Hodges 1998), or their construals and constructions of what is afforded them in both settings may be partial, incomplete (Valsiner 2000). Alternatively, as suggested above, they may simply misconstrue what the setting is suggesting to or affording them. For instance, they may not recognise the boundaries of which others might be aware. Importantly, in such a perspective, learners are placed at the centre of considerations for realising the integration of experiences across both settings, rather than in those settings. That is, how individuals engage with what is afforded them in both settings and if or what they seek to reconcile, reject or possibly ignore the contributions from elsewhere shape how they integrate those experiences. In this perspective, the emphasis is on the individual engaging in and coming to know, whilst among other experiences they engage in both workplace and educational settings.

Explanations provided by phenomenology and, even social phenomenology, offer similar standpoints to those advanced in the section above. The phenomenological 'Now' to which Schutz (1970) emphasises the immediacy of experience through which the construal and construction of knowledge arises. As elaborated earlier, these processes are mediated by what he refers to as typification. The

links here to other concepts such as appropriation from sociocultural theory, and accommodation and assimilation from developmental studies are obviously consonant. The emphasis within these accounts is that individuals' construal and construction of what they experience are strongly mediated by the workings of individuals' subjective private worlds. That is, they arise through individuals' life histories and become the means by which what is subsequently experienced (i.e. phenomenological 'Now') when encountering and reconciling activities and interactions in both settings. These private worlds can never be fully captured or measured, yet may explain something of the diverse ways in which personal processes of experiencing progress, even in response to the 'same' experience. The personal legacy here comprises changes in individuals' domain of knowledge, their knowledge and ways of knowing (Billett 2009b). That is, what they know, can do and value. All of these explanatory propositions emphasise the role of individuals' processes of ontogenetic development (i.e. that across their life histories) in the construal and construction of what is experienced, as these are the bases through which the process experiencing occurs and learning arises.

This explanation, therefore, emphasises individuals' prior or pre-mediate experiences (Valsiner and van der Veer 2000) and knowledge constructed earlier shaping what and how they learn from what they experience in the two settings and also how their personal cognitive experiencing (Valsiner 2000) shapes how they elect to reconcile what they have experienced and learnt in both settings. More than personal histories, individuals' capacities, knowledge of particular discourses and interests all shape the intentionalities, means and effort with which they engage in these settings and reconcile what they have learnt from each set of experiences, and also other experiences they have had that mediate those experiences. This explanation emphasises the important role individuals have in constructing knowledge and that ultimately, these processes are, by degree, person-dependent. These factors are supported in accounts seeking to explain the development of occupational knowledge including the integration of dimensions and kinds of that knowledge. For instance, how learners engage in interactions and activities in both settings, and others, can lead to the development of rich conceptual knowledge and the formation of associations between concepts and propositions that are central to the development of occupational expertise (Chi et al. 1981; Ericsson and Lehmann 1996). Identifying and understanding causal links and associations is highly effortful: i.e. demanding and requiring existing knowledge (Roth and Roychoudhury 1993). So, if individuals elect, or are unable to engage in such demanding cognitive processes because they lack the readiness to do so or are lacking in interest, they may not develop depth of understanding or well-honed procedural capacities. Importantly, this kind of development is not that which arises easily from teaching or guidance by others. Instead, it is a product of individuals' effortful engagement and learning. Indeed, these and other kinds of higher orders of learning are likely to be far more dependent upon the level and kind of effort that individuals' invest in their thinking and acting, than teaching. However, teacherly practices can attempt to redress lack of readiness and interest by supporting that learning and emphasising its worth.

Similarly, with procedural development, the degree by which individuals elect to practice, monitor and develop further their procedural capacities is shaped by personal factors (Anderson 1993). Ericsson (2006) uses the term 'deliberate practice' to capture the effortful engagement that individuals who are highly proficient (e.g. excellent) at something intentionally engage in to secure and sustain that level of performance. Salient here is the role of personal dispositions. Individuals' processes of experiencing and construction of knowledge are usually more than a cold cognitive process – a sensory or visceral reaction to stimuli. Instead, they are largely shaped by individuals' interests and emotions: their dispositions (Perkins 1997; Tobias 1994). It follows that issues central to individuals, as shaped by their interests, intentions and sense of self, may be more likely to be engaged with effortfully than activities regarded as being uninteresting and of little worth by them. So, personal interest and intentionality plays out strongly in the processes of experiencing and accommodation (i.e. contextualisation, typification, boundary making and crossing) as discussed above. Effortful engagement will likely lead to a richer learning experience and stronger development than uninterested and unfocused participation in activities, no matter how potentially rich the affordances (Perkins et al. 1993). Moreover, depending on the learners' readiness to participate: what they know and can construe from what they experience is central to what they will be able to construct (i.e. learn) through these experiences. A consideration of personal contributions also extends to brute factors such as weariness, alertness, fatigue and tiredness that shapes the level and intensity of engagement (Billett 2009a). Just as the social world is unable to project its message uniformly and unambiguously, as referred to above, so too individuals' processes of experiencing, including the construal and construction of what is experienced in the immediacy of the particular moment or phenomenological 'now', is shaped by their interest, energy, and time available, let alone willingness or ability to commit their resources that particular process.

Yet, placing the person centre stage potentially promotes them to adopt an immature, extreme or uniformed view. It also positions this account of learning as being too much about individuals' idiosyncratic construction of what they experience in work or educational settings. Instead, their learning processes need to engage with and secure understandings, procedures and values that have arisen over time within that occupational practice, having been shaped by what is effective, and informed by considered enquiry of that knowledge. That is, the emphasis should be on interdependence, not independence. Students need to engage with and remake the canonical knowledge of their selected occupation through an active process of understanding, developing capacities and dispositions that have often taken generations of practice and inquiry to develop. In doing so, they variously transform, refine and hone their personal domains of knowledge, through its exercise in educational and practice settings. So, their learning is patterned by social experience, albeit in person-particular ways (Billett 2003). Indeed, despite what has been advanced above, i.e. that individuals actively construe and construct from the immediate social experience, albeit in different ways and through personally particular ways. Yet, there remains an absence of a complete account of how

individuals intra-psychologically engage in, construct knowledge from and integrate experiences across physical and social settings, and learn richly from them. To achieve these kinds of outcomes, considerations of the social settings and brute facts (e.g. physical strength, energy) are also required as are the relations amongst all of these factors. So, there are limits to any certainty about the degree by which that the patterning of what is learnt is predominately situationally or personally-mediated.

In all, explanations emphasising personal processes of construal and construction are central to processes of understanding and integrating experiences in both practice and educational settings and learning from them. Yet, as has been proposed, these acts of construal and construction are not divorced from the circumstances, both physical and social, in which these individuals act. Added to those processes is a need to account for the relations among the social and brute experience of both kinds of settings, how these contributions might best be organised to assist the effective sequencing, duration and securing of these contributions, and how individuals will draw from, link and reconcile (i.e. integrate) the contributions of the two sets of experiences.

Hence, to more fully explain this process of integration – as linkages and reconciliation – necessarily requires an accounting of the duality comprising the processes and contributions of both the personal and the social. The following aims to offer such a conception.

### *4.4.3 Integration as a Socio-personal Process*

From the discussions above, explanations about the experiencing and integration of activities and interactions in both settings need to account not only for the social, personal and brute contributions to these processes, but also the relations amongst them. There is a need to go beyond considering what is afforded by social settings and suggested by physical environments as objective phenomena and also personal factors to view both as being inseparable. These contributions are interdependent and relational sets of factors for explaining processes of learning from and integrating experiences across physical and social settings (Akkerman and Bakker 2011, 2012; Billett 2006). That is, accounting for contributions of and relations between the settings that afford particular kinds of contributions (i.e. activities and interactions), and how individuals' utilise their knowledge in engaging with those experiences and then reconciling or integrating them within their educational program. In short, a socio-personal explanation is required to accommodate not only the uncertainty of what the social world projects, but also the ways that individuals construe what is projected, and decide how they will engage with it.

Hence, it follows that a third explanatory account is required to account for the diversity of experiences afforded students in different kinds of work or practice settings, and educational programs, and their person-dependent constructions of what was experienced in and across these settings. What for one individual might be

a highly inviting and engaging experience that is generative of honing procedures or deepening understanding, might for another be uninviting and disengaging, with equivalent cognitive legacies. Moreover, as noted earlier, whereas one individual might be aware of these boundaries in an occupational practice and seek to negotiate activities in ways that are respectful of them, another might deliberately contravene them, whilst a third might not be aware of such boundaries and, therefore, have no reason to negotiate those aspects of their work. The kinds of activities that individuals are invited to participate in might be new and interesting for some, and very familiar, and possibly dull, boring and unengaging for others. For instance, recently, a resident who supervises medical students in an emergency facility in a major US city advised me that what his students find fascinating, engaging and sometimes overwhelmingly confronting in this ward, to him are mundane and tedious. Similarly, the affordances of social settings such as the guidance offered by more experienced workers might be greatly welcomed by some students, and seen by others as being unhelpful interference or constraints on their agency. Again, in the same medical school, students advised that the grand rounds (i.e. where a senior registrar works around the patients in the ward accompanied by medical students and nurses) which are seen as a key learning element of medical education are too long, unengaging and not a good use of their time. They stated their time might be better spent engaging in more learning intense activities, such as following up particular case conditions on the internet, than long periods of following registrars around wards. Affordances held to be of great worth by some are questioned by others, in this case those positioned as learners.

Yet, there are other powerful reasons for viewing the integration of experiences as comprising a duality (i.e. a set of relations between two entities) across both personal and social contributions. Beyond these explanatory accounts are those advising about how intentional educational experiences might best progress. The organisation of such experiences is central to the purposes of the development of occupational capacities and situational competencies required for competence at work. The active process of engagement is emphasised in relations between learners and the world beyond them (i.e. beyond the skin) (Wertsch and Tulviste 1992), so to speak. Their engagement is, however, also mediated by activities and interactions afforded in the educational and practice settings. The genius of human learning and development is found in these relations because they accommodate both active engagement and richness of affordances (Miller and Goodnow 1995). In these circumstances, the process of appropriation (Luria 1976) or making knowledge individuals' own, comprises engaging with and reconciling the contributions from the two different settings, based on how individuals construe and construct experiences in those settings (i.e. the process of experiencing). This process of reconciliation, which is analogous to securing equilibrium (Piaget 1971), viability (Van Lehn 1989) or ontological security (Giddens 1991), as discussed earlier in this chapter, leads to changes in individuals' personal domains of knowledge as legacies of these processes of experiencing. Procedurally, the garnering of these experiences (i.e. organised and ordered provisions and effortful engagement) can progressively contribute to developing the kinds of canonical and situational domains of the

knowledge required for practicing the particular occupation and in particular settings. In all of this, the process through which individuals actively construe and construct (i.e. appropriate) knowledge is premised upon what they know, can do and value (i.e. their cognitive experience) as a result of earlier experience (i.e. their pre-mediate experience) (Valsiner 2000). Yet, although there can be no confidence that what is afforded individuals will lead to them construing experience and constructing particular kinds of knowledge, regardless of what is afforded them. Instead, it is the situational-psychological environment that shapes individuals' engagement in social practices through which they come to experience, reconcile and develop further what they know, can do and value, albeit patterned by the social and physical circumstances in which they engage (Billett 2003).

The other key outcome arising from this process of experiencing and reconciliation is the continuity and advancement of cultural practices (e.g. occupations). Certainly, there is a need for higher education students to participate in programs developing occupational knowledge to secure access to and engage with the forms of occupational knowledge that have arisen through culture and history. This knowledge has been proven as effective over time and evolves to remain applicable and effective through enhancements and embellishments when responding to the particular requirements for practice. Yet, the process of individual learning is also socially reproductive, as it also comprises the remaking of this knowledge (Donald 1991; Valsiner 1998) at a particular point in time and in relation to a particular instance of practice, and comprises active and critical engagement by students. Otherwise, it becomes too situationally-premised and denies engagement with broader (i.e. canonical) requirements. That is active appropriation, rather than mastery (i.e. superficial compliance and reproductive learning) (Wertsch 1991). This remaking through appropriation may well arise as students apply historically-derived knowledge selectively and appropriately in their practices, not merely reproductively (Billett et al. 2005; Valsiner 1998), from what they have learnt through their educational program, which is a key contribution of practice settings. Perhaps this is what the medical students were proposing in their preference for self-directed learning using internet sources, rather than repeatedly engaging in the 'grand rounds' that more senior clinicians so valued. Indeed, the capacity to critically engage and appraise what individuals know, can do and value will be personally premised as they encounter circumstances that offer perturbations and uncertainties. Responding critically to such circumstances is an attribute required of effective professional practitioners, who are likely to engage in responding to novel tasks, sometimes in circumstances of relative isolation, and need to find ways of addressing such circumstances. This process may commence students' engagement in authentic work activities and interactions in their practicums, where they are removed from direct guidance of their teachers, yet able to engage indirectly or directly with workplace experts. While these considerations emphasise the importance of learners' agency in constructing the knowledge to be learnt, they also acknowledge the important contributions of direct and indirect guidance of social partners, situated norms and forms, and access to authentic instances of practice to

assist their construction of that knowledge is required. So, the personal experiencing of practice circumstances alone is insufficient.

Hence, educational responses (i.e. curriculum and pedagogic interventions) need to account for the duality between the contributions of the personal (i.e. cognitive experience, domains of knowledge) and the affordances of the settings in which they engage in activities and interactions, including informed partners who can assist and support that learning. The integration of such experiences is important for making associations and reconciliations, which are analogous to processes that many developmental theorists have used to explain the human response to novel experiences (e.g. accommodation, viability, typification, ontological security, boundary crossing etc.). It is through such engagements, albeit guided by more experienced others that students will come to make links and reconcile what they have learnt in both settings. This issue is taken up in Chap. 8 in addressing the kinds of pedagogical practices that can be used to support productive reconciliation of experiences. These kinds of processes and outcomes are those most likely to generate not only the kinds of knowledge required to practice, but also the associations amongst them that are important for effective practice. Indeed, as Schutz (1970) advises, rather than presuming the links and reconciliations that students make will be optimal, it is better for them to be supported and guided to secure the kinds of outcomes required for the occupation, and, if it is known, that particular circumstance in which they will practice that occupation. This is indeed the focus of the kinds of pedagogic practices that need to be enacted prior to students' engagement in workplace experiences, and also their return from those experiences, which are addressed in Chaps. 7 (i.e.- Curriculum Considerations: The Integration of Experiences) and 8 (i.e. Pedagogic Practices Supporting the Integration of Experiences) of this book.

## 4.5 Considerations of Integrations of Experiences

As has been elaborated and discussed here, one approach to explain these integrations or reconciliations is to identify the characteristics and potential contributions of both the educational and practice settings to students' learning, and then align them with what needs to be learnt for the students' intended occupational practice. That is, to identify how and what each setting can contribute to achieving the particular educational purposes, and then construct the curriculum and pedagogic means to utilise and integrate those contributions effectively. From this perspective, these settings are viewed as being objective physical and social environments that have particular activities and interaction that will potentially afford (i.e. offer) and yield to students specific forms of knowledge. That is, the kinds of knowledge utilised and accessed in each setting. The assumption here is that the knowledge that is accessible and suggested in each setting is unequivocal and unambiguous. What is required in such an account is for students to appropriate and integrate what is afforded them in each setting.

Conversely, there are accounts of these integrations that strongly privilege students as active constructors of the knowledge that is accessible in each setting and their role in integrating what has been experienced (and learnt) in both settings. This account is premised on individuals' processes of construing and constructing knowledge (i.e. learning) from what they experience. In this account, learners' process of 'experiencing' is emphasised and seen in terms of how they subjectively construe and construct knowledge from what they experience in and across the two settings. Here, students' cognitive experience (Valsiner 2000) and their interests, intentionalities and direction of their experiencing (Malle et al. 2001) are to be central to how and what is learnt within and across experiences in these two settings. These two conceptions of experiencing and integrating or reconciling experiences are seen here are representing those that propose a socially and phenomenologically-derived accounts, respectively.

However, a third way is proposed here that offers an accommodation of both of these approaches and is advanced as a socio-personal conception of experiences, experiencing and the integration being personally-mediated reconciliations of those experiences. This approach proposes a relational duality between the contributions of the settings (Billett 2008) and how individuals construe what is experienced and learnt through and across the two settings, and their reconciliations. It also attempts to accommodate the limits and perils of accounts based on either the social suggestion or the personal construction (Miller and Goodnow 1995). Procedurally, this account of integration includes considerations of what each environment can potentially and should afford students, yet also how students need to actively engage in, learn through and proceed to reconcile these experiences, albeit in personally-distinct ways. Yet, the affordances that comprise the opportunities to learn the knowledge required for particular occupations and the students' engagements with them need to be organised and enacted in ways directed towards and optimising opportunities for achieving the occupational outcomes required from such programs. This socio-personal account is offered as providing a much needed and comprehensive explanation of what constitutes these integrations and how they might be most effectively promoted within higher education provisions.

In many ways, it is the duality that comprises the two sets of contributions (i.e. those from the immediacy of the situated world and those from individuals' personal histories) which becomes so central to understanding and advancing ways to assist in the reconciliation of experiences across education on workplace settings. Yet, to understand more about how these reconciliations might best be advanced and realised through educational processes it is necessary to helpful to draw upon empirical and practice-based evidence.

It follows that, in the next chapter, the two studies whose findings are drawn upon here are described in terms of their purposes, processes and those participating in them.

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# Chapter 5
# Learning and Teaching Projects

## 5.1 Learning and Teaching Projects

A theme emphasized across this book is that provisions of educational experiences should be intentional in their design and enactment (Marsh 2004). As such, the identification and selection of educational intents (i.e. aims, goals and objectives), curriculum and pedagogic strategies to realise those intents need to be well informed (Tyler 1949). Therefore, given its central focus on providing and integrating practice-based experiences for higher education students, these discussions need to be informed in ways that promote effective educational decision making. This includes aligning particular educational intents with curriculum and pedagogic practices that can be directed towards realising these purposes (Print 1987). In addition, there are particular emphases in that decision-making that anticipates how students will engage with, reconcile and integrate these experiences (Pinar 1980). To effectively inform these educational provisions, their enactment and experiencing, requires a consideration of curriculum and pedagogy, and particular emphases on students' roles. Therefore, it is helpful to draw upon the findings from teaching and learning projects in two national teaching fellowship lead by the author that focused on these issues.

The findings, deductions and recommendations about curriculum and pedagogic practices, and students' personal epistemologies proposed here to achieve intended purposes are presented in the following four chapters. Those findings are the product of 25 practical inquiries undertaken by educators in higher education that together constituted these fellowships. These projects were undertaken across a wide range of occupational disciplines, and within and across seven Australian universities. The purposes of the two learning and teaching fellowships were focused on the integration of students' experiences in workplace and university settings, with particular concerns associated with how those experiences might be organised and implemented (i.e. intended and enacted curriculum), the kinds of pedagogic



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practices used to enrich these experiences, and how students come to understand and engage with these experiences (i.e. the experienced curriculum).

The first fellowship – *Developing agentic professionals through practice-based pedagogies* (Billett 2009) – focused on how higher education students should be prepared to be agentic (i.e. proactive, focused and intentional) learners as they engage in and learn through their practice-based experiences (e.g. clinical placements, practicums). The second fellowship – *Curriculum and pedagogic bases for effectively integrating practice-based experiences within higher education* (Billett 2011) – built on the findings of the first fellowship, and, as noted, particularly focused on identifying curriculum and pedagogic principles and practices that support the effective integration of higher education students' experiences across practice and academic settings. The processes and deliberations within these two fellowships and their findings are used here to inform how curriculum and pedagogic principles and practices can promote the integration of these experiences. In addition, issues associated with students' personal epistemologies and the development of these capacities required for effective learning within practice settings are then reconciled across experiences in the two settings, is also a focus for this decision-making.

Together, the 25 projects comprised a set of studies of learning and teaching undertaken by teachers in higher education sought to understand and address specific concerns associated with providing their students with practice based experiences and their integration. These concerns were identified and undertaken by each project team. So, they were very much practice oriented and focussed. They addressed issues faced by those who are teaching and across a range of disciplines. However, these projects are not necessarily representative of higher education provisions per se, nor do or can their findings and recommendations claim to be comprehensive or representative of this educational sector. Instead, they offer a range of instances that provide a platform upon which to inform and advance principles and practices within higher education associated with the provision and utilisation of practice-based experiences. Nevertheless, given these projects were undertaken across a range of universities and drawn from disciplines in both social science and physical science, these were able to at least reflect something of the broad range of higher education provisions. Moreover, the findings reported and advanced here are consistent with related projects and studies (Cooper et al. 2010; Eames and Coll 2010a, b; Orrell 2011).

Given that these two fellowships constitute the key bases by which recommendations for implementation of curriculum and pedagogies practices and the promotion of students' personal epistemologies are advanced, it seems important to summarise their aims and processes, how the projects progressed, how the data were analysed and findings synthesised. As noted, the first fellowship was concerned with developing students as agentic learners (Billett 2009). It comprised a total of five projects in nursing, midwifery, human services and physiotherapy which were undertaken over a 12 month period by teachers working in those discipline and areas (see Table 5.1). The second fellowship was far larger and with a broader ambit expansive and extensive and focused on identifying curriculum and pedagogic

**Table 5.1** Developing agentic professionals through practice-based pedagogies; project

| Field | Purpose of the project is to | The approach selected is to |
|---|---|---|
| Physiotherapy | Develop, enact and assess a preparatory program for assisting physiotherapy students meet the requirements of clinical practice. These students report being underprepared for the complexity and uncertainty of clinical practice. Health care work is inexact, yet these students are expected to: (i) apply theory to practice, (ii) form professional and productive relationships with patients and co-workers, (iii) navigate institutional norms during their practicum, (iv) interpret and respond to changing expectations and their knowledge of physiotherapy and health care | Engage third year students in a four-day pre-clinical program, prior to their placement, to make these expectations transparent, provide them with explicit skills in adult learning, and to ease the transition between academic and clinical learning environments |
| Nursing | Enhance final year undergraduate students' preparation for their nursing role by enabling an effective transition to clinical practice through their engagement in critical reflection activities. For novice practitioners, interacting with a range of health discipline staff can be challenging. These challenges are accentuated in contemporary healthcare settings by constantly changing patient/client care needs, which can add to an existing sense of being under-prepared for nursing placements. An associated concern gauges how the existing curriculum supports developing agentic learners | Enact processes of supported reflection to enhance the students' capacity for and an awareness of addressing issues and challenges that newly qualified graduate nurses may encounter in their placements. Reflective practices are used to illuminate and assist addressing this issue, and appraise the degree by which they are becoming agentic learners |
| Midwifery | Understand the midwifery learning that occurs through a continuity clinical practice model: continuity of care (CoC). The CoC is a mandatory component of the national midwifery curricula, requiring students to undertake 30 FTEs across their midwifery degree. Students' engagement in the CoC is dependent on their year level. It progresses from undertaking an observational role under the direct supervision of a registered midwife to increasing participation in a more active role for the birthing woman and her family | Utilise students' written summaries of CoCs including: an introduction to the woman and her family, and reflections on their experiences of pregnancy, birth and postnatal period for the birthing woman and how these contribute to the students' learning about midwifery |
| Human services | Prepare students for managing confronting experiences that comprise routine aspects of human service work. The approach is to develop and trial learning circles strategies as a means to guide students' learning so they are adequately prepared for these experiences | Use learning circles as a strategy to enhance students' capacities to respond productively to confronting experiences as agentic professional and to maximise their learning from these experiences |
| Nursing | Support student nurses' preparation for practicum experiences through evaluating the usefulness of the Clinical Portfolio as a tool to support student preparation for clinical practicum, and to enhance communication with registered nurse 'buddies' during the clinical practicum | Evaluate the utility of a practical booklet for students to use throughout their clinical experiences during the Bachelor of Nursing program |

**Table 5.2** Participating universities, projects, participants and disciplinary focus

| University | Teaching area | Teaching area | Teaching area | |
|---|---|---|---|---|
| Griffith | Law project (Rathus/Giddings) | Journalism project (Forde/Meadows) | Applied Theatre project (Balfour) | |
| James Cook | Creative Arts project (Daniel) | Teacher Education 1 project (Hill/McDonald) | Business project 1 (Benck-endorff/Blackman) | |
| Newcastle | Commerce project (Yap) | Music project (Scott) | Engineering 1 project (Sher) | |
| La Trobe | Allied Health project (Dodd) | Teacher Education 2 project (Prain) | Communication project (Benson) | |
| Flinders | Social Work project (Clarke/Oliphant) | Tourism project (Fanning) | Business 3 project (Mills) | Medical Education project (Sweet) |
| Murdoch | Chiropractic project (Maire) | Business 3 project (Holloway) | Engineering 2 project (Lee) | Public Relations project (Fitch) |

Please note – how these projects are refereed to across the chapters is based on the project titles in this table

practices that can support the effective integration of students' experiences and learning across practice and academic settings (Billett 2011). This fellowship comprised a total of 20 projects across a wide range of disciplines and project foci (see Table 5.2). Again, these projects were taken over a 12 month period and their findings complemented and augmented those of the first fellowship. In the following sections, the purposes, processes and outcomes of each of the two fellowships are discussed in overview.

## 5.2 Fellowship 1: Developing Agentic Professionals Through Practice-Based Pedagogies

The principal goal for this fellowship was to understand how best higher education students could be prepared to engage in and maximise their learning experiences in practice settings (Billett 2009) This goal extended to these students seeking associations between the experiences they encountered in those settings and the experiences provided for them through their courses, and as directed to what they are intended to learn in their courses. Central to this outcome is students' ability to engage with and reconcile the experiences and learning derived from both the practice settings and those afforded in and through their higher education institutions courses. As noted in earlier chapters, developing learner agency is important for individuals effective learning and practice (Goller and Harteis 2014; Smith 2005; Taylor 1985), but particularly so when they are engaged in learning-related activities beyond the direct guidance of their teachers and in circumstances (i.e. practice setting) in which they must be active, engaged and monitoring of their own and

others' performance and learning (Billett and Pavlova 2003). The term 'agentic learner' was used to capture the qualities of higher education students need to be: (i) proactive, within boundaries, when engaging in activities and interactions in both education and practice settings, (ii) focused in ways that acknowledge that students' effortful engagement is more likely to lead to richer learning than when they are engaged only casually and without interest and (iii) intentional in so far as their learning has to be directed towards particular purposes, often associated with securing the kinds of capacities they need to move smoothly into work upon graduation. It is on these bases that the worth of providing and integrating work experiences that are appraised in this fellowship, as noted in earlier chapters. Moreover, beyond students' requirements for the initial learning of an occupation, the need to develop individuals as agentic learners is also a key quality required of practising professionals. That is, they need the capacity to monitor and be reflexive with their own practice and actively engage in ongoing learning to promote and improve the quality of that practice. So, more than just pedagogic or epistemological concerns associated with initial occupational preparation and successfully completing their degree programs are those associated with developing learner agency in ways aligned with sustaining their occupational competence across lengthening working lives. This kind of capacity pertains to all classes of workers, it seems, because of the changing requirements of work and work practices (Billett 2006; Forsman et al. 2014; Zuboff 1988). However, in particular, professional practitioners have particular requirements for demonstrating the currency and effectiveness of their occupational practice (Grealish 2015; Hungerford and Kench 2015). This attribute is growing in importance because not only does human knowledge about occupational practice constantly change and grow, but the judicious application of that evolving knowledge in particular circumstances is now recognised as being central to how practitioners are effective. That is, beyond possessing the canonical knowledge of the profession, there is a need to be circumspect and adroit in fulfilling occupational obligations in the particular set of circumstances where they practice (Billett 2001a). The point here is that the circumstances in which occupations are practised differ, as do the requirements for performance of their work. Consequently, developing such situationally appropriate capacities is an important educational purpose when educational provisions are directed towards developing occupationally proficient graduates.

It follows, therefore, that the proposed goals for this fellowship were to:

(a) enhance students' learning of their professional practice, including making efficacious the transition to competent practice;
(b) improve teaching and learning practices through using practice-based experiences;
(c) develop and sustain the use of those practices through changes to their institutions' commitments, curriculum and pedagogy; and
(d) engage in an active dissemination of those practices in the participating universities and across others.

The central question for this fellowship was:

*How best can practice-based learning experiences and those in the university be integrated to provide effective teaching and learning for professional practice?*

The associated sub-questions were:

*What teaching and learning practices need to be enacted to maximise the contribution of learning from practice based experiences?*
*How should activities be enacted in practice settings to secure rich learning outcomes?*
*How can teaching practices within universities promote students' capacities to be agentic in their learning and further develop effective professional practice?*

These goals and questions were addressed through five projects across four disciplines (i.e. Physiotherapy, Midwifery, Nursing, Human Services) in three Australian universities (Griffith, Monash and Flinders). The key activities the participants undertook comprise:

(a) integrating practice-based experiences in response to discipline specific teaching and learning issues, including developing students' capacities as agentic learners;
(b) enacting and appraising selected approaches to teaching and learning that aimed to develop learner agency;
(c) evaluating the outcomes of these interventions and their applicability to other disciplines in each university; and
(d) identifying how the approaches deployed within these universities can be replicated across the higher education sector.

Together, these five projects provided a platform to consider and appraise different aspects of and approaches to pedagogic and curriculum practices supporting the development of students as agentic learners in practice settings, and ultimately, as working professionals (see Table 5.1). The focus for the projects selected and appraised in this fellowship were aimed to support the development of qualities that students require to learn effectively in both university and practice settings (Billett 2009). These qualities include being constructively critical in evaluating the contributions of both settings, as a means for developing the capacities as professional practitioners. Across the five projects, a series of practices were identified that if selectively enacted before, during and after student experiences in practice settings, might secure rich learning through fostering and developing agentic qualities in students.

### *5.2.1 Fellowship Process*

The process enacted in this fellowship focussed on the participating academic staff identifying, enacting and evaluating approaches that secure integration in

preparatory programs in four discipline areas (i.e. nursing, physiotherapy, human services and midwifery). These professional fields were selected because of their importance in providing and maintaining an effective national healthcare work force, and when faced of significant skill shortages and issues of low retention of these kinds of workers in the healthcare sector, along with an ageing population increasingly in need of good healthcare. The fellowship activities comprised a series of discrete projects, focussed on:

- identifying, enacting and appraising teaching and learning strategies to better integrate the contributions of students' experience in academic and practice-based settings in each of the participants' teaching areas;
- proposing means of developing and extending students' agency and personal epistemology within each of the five projects;
- developing the capacities of academics in the participating universities and disciplines to provide and sustain teaching and learning experiences likely to maximise academic/practice-based integration; and
- initiating the development of teaching and learning capacity more widely within the participants' universities and disciplinary fields.

In the sections below, the phases comprising this fellowship are briefly described, and are summarised in Table 5.1 that follows.

### *5.2.2 Phase One: Identifying Responses*

This first phase focused on examining the specific teaching and learning issue to be addressed in each of the areas and developing teaching/learning responses to be enacted in Phase Two. Each project developed a project plan that was used to identify its purpose, select particular approaches to supporting learning and guiding their enactment. Through a process of discussion across the fellowship participants, the key focuses for the projects were revised and refined. In each instance, the focus was on how the experiences in both the academic and practice setting could together best contribute to improving students' learning experience. This outcome was realised through identifying key teaching and learning issues, and then selecting approaches to be enacted to address them. This refinement was achieved through face-to-face meetings with the participants in each institution. As part of this process, specific consideration was given to how best to develop their students as engaged, proactive and reflective learners. The framework developed and discussed by participants was used to identify the kinds of experiences that would be provided in each project, how students would likely engage with these experiences, and the anticipated learning outcomes. The goal here was to identify the pedagogic properties of students' experiences in both the university and practice settings, especially when they were integrated. This goal included how the experiences might be best organised to develop student-practitioners as active and critical learners in relation to the participating institutions' specific teaching and learning goals and processes.

Consideration was also given to how the particular issues being addressed in each project would be enacted through the specific approaches proposed in each project.

### 5.2.3 Phase Two: Enacting Integrations

This phase comprised the enactment of the interventions during a teaching semester in each of the five academic areas across the three universities. Support was provided to each of the teams to develop further their capacity to organise effective teaching and learning experiences for their students focused on the integration of the contributions of both the academic and practice settings. Evaluations of the processes enacted were mainly gathered from students, but also from individuals in health care workplaces, through survey sheets, interview transcripts and processes designed to capture whether the strategies were achieving their intended purposes. The approaches used in this activity were those that had been applied successfully earlier when identifying contributions to learning in workplace settings (e.g. Billett 2001b).

### 5.2.4 Phase Three: Appraising Practice and Development

In this phase of the fellowship, participants appraised the teaching and learning processes they had enacted across the semester and their outcomes individually and then engaged with and shared their findings through a meeting with the other participants. This meeting focussed on the effectiveness of the selected teaching and learning approaches in addressing the participants' particular teaching and learning issues. It comprised presentations of findings by each of the project teams and was followed by a discussion involving all participants about how the findings related across projects. From this discussion, a set of tentative principles and practices for the effective integration of learning experiences in practice settings was identified.

### 5.2.5 Phase Four: Consolidation and Dissemination

The tentative findings were subsequently presented and discussed at a meeting referred to as a development conference. Here, the findings were consolidated into a set of principles and practices to guide the development of approaches for facilitating, monitoring and evaluating the integration of students' learning experiences in higher education and practice settings. The development of these approaches was important, as they can be used to guide and appraise the effectiveness of practices for generating agentic learners who are able to maximise their experiences in and across university and practice settings. This process was supported and assisted by participants engaging in considerations of these tentative practices and principles through finding ways of relating them to the five areas of teaching.

### *5.2.6 Data and Analysis*

In different ways, all five projects came to focus on teaching and learning interventions to occur: (i) prior to, (ii) during and/or (iii) after students had engaged in practicum experiences. This simple set of considerations came to provide a foundation upon which to consider the worth of the different approaches and how findings across the projects might be consolidated. However, for each project, the analytical reach was not restricted to the point in time at which the intervention was enacted. Instead, data gathered through the appraisal of each project identified implications specific for interventions before, during or after the practicum experience. Each of the five project reports identified particular purposes and significances of the interventions used to promote agentic learning for work activities and interactions, and also findings from the appraisal of these interventions. As noted, in each project the participants commenced by identifying a particular practice-based concern for student learning in their programs and then enacted selected interventions of different kinds to trial and appraise the potential worth of the curriculum and pedagogic responses to those concerns. In these ways, the approach, method of appraisal and findings are of quite different kinds. However, in each, there emerged a discussion specifically focussed on what did and should occur prior to, during and after each student's participation in practice-based experiences and settings.

Consequently, the processes for analysing the data were to draw from five distinct sets of data and were used to identify commonality and differences across all of them. This was undertaken through either working directly from the reports, or in some instances, directly from the interview and data gathered through documents provided by learners. The coherence for the analyses associated with the interventions was aligned with considerations of the processes and outcomes of those occurring before, during or after the practicum experience. That is, informants' response to particular issues were aligned with when the intervention had occurred in relation to the students' practical experiences, thereby providing a foundation for curriculum and pedagogic considerations.

In these ways, the procedures adopted here and the analysis of the data arose from particular concerns that led to tentative findings arising through the appraisal of these procedures in practice. It was these foundations that were subsequently built upon in the second learning and teaching fellowship.

#### Key Findings

Together, the five projects provide a platform to consider and appraise different aspects of and approaches to pedagogic and curriculum practices supporting the development of agentic learners, and ultimately, professionals. That is, the projects focus on a number of practices which may support the development of qualities which students require to learn effectively in both university and practice settings, including critically evaluating the contributions of both settings, in developing their

capacities as professional practitioners. Across the projects, a series of practices were identified that – if selectively enacted before, during and after student experiences in practice settings – could secure rich learning through fostering and developing agentic qualities in students.

In overview, in this fellowship it was found that:

- preparation for the required level of procedural skills (i.e. knowing how) for, and conceptual understandings about (i.e. knowing about), the occupational practice undertaken before students participated in practice settings permitted them to most effectively participate and learn in those settings;
- processes to heighten awareness about the capacities required to be agentic were central to effective practice and learning in practice settings;
- having peer and other forms of support during their participation in practice settings through forums that promoted peer interaction was helpful for developing professional understandings, and the procedures and dispositions required for effective practice;
- students learnt the processes and value of being agentic in their practices through practice and peer-based processes; and
- processes in the university setting after practice-based experiences that gave students the opportunity to share, reflect and critically appraise their experience were central to developing their professional capacities, including those associated with being agentic as practitioners and learners.

These findings provide a platform to consider how student learning in workplace settings could be promoted more widely and across a far broader range of projects and disciplines. The opportunity for extending this initial work was through securing a second and larger national teaching fellowship.

## 5.3 Fellowship 2: Curriculum and Pedagogic Bases for Effectively Integrating Practice-Based Experiences Within Higher Education

This national learning and teaching fellowship sought to specifically and purposefully identify and appraise curriculum and pedagogic principles and practices for integrating learning experiences in practice and university settings. These goals were realised through three phases of fellowship activities. Firstly, to identify the kinds of curriculum and pedagogic practices that can support effective work-integrated learning within higher education. This was realised through prompting, sponsoring and engaging with 20 projects across a range of disciplines within six Australian universities (see Table 5.2). Curriculum, here, refers to the kinds, organisation and ordering of learning experiences in practice settings and higher education institutions that are provided for students. This includes how these experiences are organised, sequenced and enacted in both the university programs

and practice setting. Pedagogy, here, refers to how these experiences in work settings can be augmented to make them richer and promote particular kinds of learning. This extends to the kinds of guidance provided to assist students' learning, in the form of teacherly engagements, and information resources, learning support and interactions, including promoting learner agency. Put baldly, curriculum is the provision of learning experiences for students, and pedagogies are the means of enriching those learning experiences, often for specific purposes. Secondly, through these projects the fellowship sought to appraise these curriculum and pedagogic bases in terms of their particular educational worth in developing the kinds of knowledge that higher education students need to acquire in order to be effective in their selected occupations, upon graduation. Thirdly, it aimed to identify whether particular kinds of curriculum and pedagogic contributions can be aligned with particular kinds of learning outcomes. Through these phases of activities and principally through the projects, it was intended that the organisation and enactment of learning experiences within higher education can be more fully understood and, therefore, carefully directed to secure effective integration of students' learning experiences.

The fellowship aimed to generate an applicable curriculum and pedagogy of practice, whose development was guided by the following question:

*What combination of curriculum and pedagogic practices will secure rich integration of learning experiences in academic and practice settings?*

This central question was then supported by two further sub questions:

*How are these best enacted before, during and after practice-based experience to secure the most effective outcomes?*

*What particular curriculum and pedagogic practices are aligned to secure instances of 'hard to learn' conceptual, procedural and dispositional knowledge required for effective occupational practice?*

These questions informed the design of the fellowship processes, how it has been enacted and how its findings have been reported.

### *5.3.1 Approach and Methodology*

The approach adopted in this second fellowship sought to address the three sets of concerns identified above in a practical and focused program of teaching development in the six participating universities. These universities were James Cook, Newcastle, La Trobe, Flinders, Murdoch and the host institution, Griffith. The overall concern was to identify principles and practices that could be adopted by academics teaching in higher education institutions who typically have busy schedules and overwhelming workloads. That is, the aim was to identify curriculum and pedagogic practices that these kind of academics can readily use within the constraints of their times, and resources.

The initial phase to realise these goals comprised a review of literature including that about practices adopted in higher education to utilise and integrate practice-based experiences. This review served to identify the kinds of curriculum and pedagogic practices that had been or are being used to organise and integrate experiences across educational institutions and practice settings, and over some time. For instance, the various models of structuring these experiences were identified, (e.g. sandwich, block release, post-program experiences), as were the kinds of pedagogic practices that can assist their effective integration. These practices were catalogued and appraised for their potential application to utilising and integrating students' learning experiences in practice settings. These models and practices were advanced as practical premises for commencing developmental activities with the participants in the program, and as potential guides for the 20 projects from the participating universities. This process was enhanced by accessing literature from and engaging with European (e.g. alternance, dual apprenticeship), Australian (e.g. work integrated learning) and North American (e.g. cooperative education) traditions of promoting learning through practice. Much of this literature has been referred to in earlier chapters.

In the second phase of the fellowship, the educational worth of curriculum and pedagogic practices supporting the utilisation and integration of practice based experiences were appraised in terms of: (i) the kinds of learning which these experiences are most likely to be generate; (ii) how they can be used with best effect; and (iii) what kinds of educational purposes are they best suited. This appraisal was undertaken through prompting, sponsoring and engaging with the 20 projects across the 6 universities (see Table 5.2 below). In this table, are listed the institution, and the teaching areas and personnel for these projects. As can be seen, the fields of study comprising these projects are broadly representative of the range of disciplines from the social, physical and health sciences that are to be found in contemporary comprehensive higher education institutions.

The focus for each project and the means of its enactment were selected by the team members and this selection usually arose from issues the participants were encountering in their teaching practice. The requirements for the project were left fairly open. However, it was stipulated that each of the projects have a requirement to include students and utilise data from students in reporting their findings from the projects. Together, these bases for projects, the processes of engaging in fellowship activities and the range of projects from across a wide variety of disciplines provided a focused and purposeful (i.e. informed and well-aligned) platform for understanding the potential issues that curriculum and pedagogic practices need to address in supporting the effective integration of work integrated learning within higher education programs. These projects constituted the core of this fellowship's activities, and their titles indicate the breadth of their focuses, as indicated in Table 5.3. So, the second phase of the fellowship comprised a year-long process of enactment of these projects across one of the two semesters in the academic year and the production of a report from each of the projects which were structured in a way for the participants to articulate the purposes of their project, what they had enacted, what their findings were and also what deductions they drew from these

**Table 5.3** Teams, disciplines and project titles

| Team (discipline) | Title |
|---|---|
| Ryan Daniel (Creative Arts) | Careers, career development and creative arts students: An investigation of the impact of theory on practice |
| Pierre Benckendorff and Anna Blackman (Business) | Learning and earning: What do business students learn from part-time employment? |
| Helen McDonald & Angela Hill (Education) | Navigating new identities: Indigenous teacher aides moving to pre-service teacher status |
| Christine Yap (Commerce) | Embedding work-integrated learning in the business curriculum |
| Nathan Scott (Drama/Music) | Preparing creative artists for the creative industries: Helping musicians cope with a range of work environments |
| Willy Sher (Engineering) | Faculty of Engineering and Built Environment students' views about their industrial experience/work-integrated learning |
| Karen Dodd (Allied Health) | Professional placement preparation program for entry-level prosthetics and orthotics and podiatry students |
| Vaughan Prain (Teacher Education) | Enhancing developmental coherence in a teacher preparation program |
| John Benson (Communication) | Debriefing communication students post their practicum experience |
| Penny Clark (Social Work) | Preparing international social work students for practice |
| Chris Fanning (International Tourism) | Flinders Tourism work-integrated learning program – evaluating learning outcomes |
| Damien Mills (Business 2) | Developing a WIL curriculum and pedagogy at Flinders Business School |
| Linda Sweet (Medicine) | Integrating workplace based learning and continuity through the first clinical year of the graduate entry medical program |
| Jo Anne Maire (Chiropractic) | Influence of an overseas clinical placement on the acquisition of cultural competence in chiropractic students |
| David Holloway (Business 1) | BUS2011 Work-based business learning – Murdoch Business School |
| Gareth Lee (Engineering | A web-based tool for mediating interaction with industrially-based engineering internship students |
| Kate Fitch (Public Relations) | Developing professionals: Student experiences of a real-client project |
| Susan Forde & Michael Meadows (Journalism) | The impact of co-operative peer reflection on the integration of work integrated learning into journalism education |
| Michael Balfour & Sarah Woodland (Applied Theatre) | Developing the capacities of applied theatre students to be critically reflective learner-practitioners |
| Zoe Rathus & Jeff Giddings (Law) | Integrating and sequencing clinical insights and experiences across the law curriculum |

findings. The procedures through which the data gathering and analysis progressed were shaped by the particular approaches used, the cohorts of students and the proposed goals of the interventions. Ethical clearance was secured for each of the projects within its particular host institution. The production of these reports, guided by a prescribed set of headings, generated data used in the findings of each projects, and then was referred to in the analysis of these projects' collective contributions.

As can be seen from Table 5.4 below, the 20 projects have diverse set of focusses and educational aims and approaches. So, rather than there being similar processes being conducted in each of the projects they were quite distinct in terms of their focus, what they aim to achieve and how they were enacted. Such an approach might be criticised for being eclectic and hard to draw findings from, lacking reliability and therefore questioning the validity of findings. However, these were the projects that the participants selected because they address particular issues or problems they were confronting in the teaching practice. Understandably, the findings were drawn from projects that had different processes and outcomes and required some synthesis and some deductions, as is set out in the next chapter. But, in many ways what was attempted, enacted and reported across these projects at a high level of authenticity associated with it. This is a slice of what is occurring and attempting to be addressed across a range of disciplines and higher education institutions. Table 5.4 stretches across two pages in this briefly setting out the focus, specific aims and approaches adopted in these projects.

The third phase comprised identifying the findings from the 20 projects, and drawing out implications for practice in higher education. This phase included using the outcomes of these projects and the findings from the data to propose how the integration of practice-based experiences might best be supported through identifying curriculum and pedagogic principles that can be used to secure those outcomes.

In all, a large number of higher education teaching staff, students and others directly participated in the fellowship activities and its projects. These participants include the 36 higher education teachers who are directly involved in projects, coordinators at each of the universities, over 800 students who were involved in different ways in the projects, and also over 80 other participants (i.e. practitioners, employers, university staff) that were involved in the projects, meaning that the experiences and insights of over 1000 individuals associated with higher education provisions were involved in some way with the projects in this second fellowship.

The progress of the fellowship activities was also very much founded in the 20 sets of participants: (i) selecting and developing their own projects; (ii) engaging in activities (i.e. visits, workshops, video conferences) supported by the fellow; and (iii) meetings that shared engagements to discuss projects and share findings within each participating university and (iv) the use of video conferences. Then, finally a two-day dialogue forum was enacted that drew together all of the participants and their projects, including findings. In overview, the key fellowship events included:

- the development of approaches to implement and improve work-integrated learning arrangements in each of the projects,
- sharing findings across the participating universities progressively, through video conferences and materials
- each project working with the fellow over a 12 month period through visits and engagements
- organising dissemination activities, including a symposium held in the final phase, within each of the participating universities

**Table 5.4** Focuses, purposes and selected approach

| Project | Focus | Specific aims | Approach |
|---|---|---|---|
| Ryan Daniel (Creative Arts) | Creative students' career development – graduates surveyed (last 5 years), existing students (43 students) and industry practitioners | Informing curriculum and students' engagement in studies | Interventions – 3rd year course – aiming to bridge learning and work |
| Pierre Benckendorff (Business 1) | Second year, business students drawing on paid part-time work to identify implications for their studies (n = 50) | Reflecting on students' paid work experiences to integrate theory with practice | 2 h workshop – and getting students to complete work sheets, and a final survey |
| Helen McDonald & Angela Hill (Teacher Education 1) | Developing indigenous teacher aides' capacity to practice, in new situations/roles/N = 14 | Assisting students' repositioning themselves in the workplace as pre-service teachers | Discussions and focus activities as part of processes of preparatory residential workshop – interviews |
| Christine Yap (Commerce) | Evaluating a course in Commerce degree that embed work-based learning in their curriculum. N = 20+ | Evaluating the efficacy of curriculum aligned WIL projects provided by local businesses | Enacting and evaluating a course premised on work-based projects |
| Nathan Scott (Music) | Music students' engagement in project based employmentN = 30 | Engaging students to reflect upon employment-related project through which they learn about music practice | Engaging students in project tasks or employment based activities and securing their reflections upon these activities |
| Willy Sher (Engineering 1) | Evaluating the efficacy of learning in Engineering students' experiences in work experience programs | Understanding the demands, engagements and outcomes for students of learning through work experience programs | A survey is being undertaken to understand the bases of and outcomes of students' learning |
| Karen Dodd (Allied Health) | 2 day preparatory program for domestic and international podiatry, prosthetics and orthotics students' clinical placements | Evaluate the usefulness of preparation program | 2 day preparatory programs for 4th year students (1.5 for domestic & 2 days for international) |

(continued)

**Table 5.4** (continued)

| Project | Focus | Specific aims | Approach |
|---|---|---|---|
| Vaughan Prain (Teacher Education 2) | Providing coherent developmental experiences for graduate teacher ed. Students | Improving quality and effectiveness of teach ed program. 90 students 4th year | 5 × 1 day school visits in first 5 weeks, then 2 weeks of classroom-based orientation |
| John Benson (Media) | Using prep process and debriefs to augment students' internship experiences | Developing students' readiness for and insights and perceptions about occupation | Students' written reflections and 30 min debrief |
| Penny Clark/John Oliphant (Social Work) | Preparing international students for placements in social services | Developing competence for practising social work | Preparation for practice, guidance by expert practitioners and sharing, drawing out and critically appraising |
| Chris Fanning (Tourism) | Evaluating three courses preparing students for effective practice | Appraising the effectiveness of learning experiences provided through these three programs | Attendance in three courses and subsequent placement experiences |
| Damien Mills (Business 3) | Scoping exercise to identify what constitutes WIL | Perceptions of work experience being provided by FBS students and staff | Survey of staff and students |
| Linda Sweet (Medicine) | Improving learning experiences for medical students | Improving the scope and depth of learning by medical students, and integration | Using case-based learning groups to improve student learning |
| Jo Anne Maire (Chiropractic) | Developing robust cultural competence in chiropractic students | Students reflecting on and sharing experiences of chiropractic work | Using a co-op seminar to reflect on students clinical placement experiences |
| David Holloway (Business 2) | Enhancing business students understanding of working in the business sector | Drawing upon students' paid part-time work and other work experiences for reflection and sharing | A work experience unit within the student programs used as a platform for synthesising and sharing experiences |
| Gareth Lee (Engineering 2) | Promoting and managing engineering student placements, including the sharing of experiences across placements, and assessment | Utilising a web-based tool to secure student engagement and sharing of work experiences – managing large groups of students' placement and assessment | Developing and trialling a web-based tool to manage student placements and secure interactions amongst engineering students |

| Project | Focus | Specific aims | Approach |
|---|---|---|---|
| Kate Fitch (Public Relations) | Developing students understanding of professional practice through discussion of diverse client interaction | Investigating the impact of a real-life client project on students' development to reflect and be reflexive. | Individual worksheet and buzz (small discussion) groups and whole class discussion |
| Susan Forde & Michael Meadows (Journalism) | Using peer reflection to enhance journalism students' internship experiences | Using co-operative seminars for peer-reflections – enhancing student learning through practice-based experiences | Use of peer- group reflections conducted in a coop seminar framework; semi-structured qual interviews with industry supervisors (2 print 2 broadcast) |
| Michael Balfour (Applied Theatre) | Applied Theatre students | Working with AT students to assist them understand how to enact AT work | Focus groups (2 × 12) groups of 1st years, (2 × 8 groups of 3rd year students), 2 tutors |
| Zoe Rathus and Jeff Giddings (Law) | Street Law clinic n = 8 law students – 2 week experience – 4th year | Positioning law students in a community legal education role – legal literacy | 3 days preparation for school presentations (workshops) preparing engagement with students (e.g. social networking, police powers, mobile phone accounts employments rights) |

- all projects and participants engaging in a two-day dialogue forum (i.e. presenting, sharing and discussing findings) and
- disseminating the findings across the participants' areas of professional practice.

### *5.3.2 Data Gathering and Analysis*

Data gathering occurred in each project, the majority of it from student participants during interventions or to report upon particular initiatives. However, teachers' perspectives were also gathered in a few of the projects. Most of the data was provided directly in reports, sometimes as appendices to those reports that each of the project leaders provided. These data were gathered through interviews, focus group activities, survey instruments, and through student reflective processes of different kinds. In essence, it constituted a range of different kinds of data focused on the particular issues being addressed within each project. Much of the findings from these data are presented in the following chapters under headings associated with overall findings (Chap. 6 – Key Findings About Integrating Experiences), and then findings that are specific to issues associated with the organisation of learning experiences (Chap. 7 – Curriculum Considerations: The Integration of Experiences), those associated with enriching students' learning arising from their experiences in practice settings (Chap. 8 – Pedagogic Practices Supporting the Integration of Experiences) and then those associated with the development of students personal epistemologies (Chap. 9 – Developing Students' Personal Epistemologies). From these headings, it is clear that it was necessary to analyse the data to identify findings associated with each of these topic areas.

The process of engaging with the data was to work through each of the reports and draw out instances of data and then categorise their contributions under a series of headings associated with:

(i) overall findings,
(ii) intended curriculum,
(iii) enacted curriculum,
(iv) experienced curriculum,
(v) pedagogic practices undertaken before practicum,
(vi) pedagogic practices enacted during practicum,
(vii) pedagogic practices enacted after practicum, and
(viii) personal epistemologies.

These categories were used to organise the data, identify findings (both of the specific and overall kind) and make deductions from these data. In some ways, the findings and deductions drawn were derived partially from the precepts under which the projects had proceeded (i.e. a consideration of what might occur before, during or after practicums), but were open to what patterns were evident in the data.

### *5.3.3 Attributes of the Investigations*

The processes used in each of the projects, the means by which the investigations progressed, the data gathering procedures used, the kinds of data gathered and initial findings from each of the projects were very much premised upon the particular goals for that project. Hence, there were essentially 20 different projects that comprised the overall fellowship. In many ways, this led to a very diverse set of data being gathered and bases for its analysis were initially quite project specific. Therefore, a key limitation was that rather than applying the same methods and procedures across the 20 projects, each was in some ways quite distinct in terms of the procedures used and the kinds of findings generated. As noted, this approach, of course, can be seen as being a limitation if the intention was to utilise a uniform se of interventions and generalise findings across these projects. Indeed, quite different kinds of data were developed which on face value were difficult to align across the entire body of the data. Clearly, such an approach may not meet the requirements for quantitative measures that seek to identify and validate patterns on the basis of consistent data.

Instead, the strengths of this approach are found in data arising from a range of initiatives that have quite specific, but interrelated goals. Moreover, the data were founded in responses to specific problems and issues that confront the integration of students' experiences across practice and academic settings within a range of occupational disciplines. That is, the data are highly grounded in particular circumstances associated with attempts to integrate experiences across academic and practice settings. What was required was extensive and detailed analyses of data and its tabulation within cognate areas associated with the categories referred to above. Using these categories permitted the findings to be aligned and deductions drawn from different kinds of data referring to particular phenomena and the development of responses in the form of proposed procurement pedagogic practices. Coherence, therefore, arose not through uniform interventions and processes of data gathering and data, but through the careful organisation and categorisation of findings and then the analysis within those categorisations. All of this required an active engagement with all of the data and its initial findings, and then their verification with the projects that had generated these data.

Consequently, the attributes of the investigations were more about addressing issues of relevance to each of the academic projects, gathering and analysing data that were generated specifically within those projects, and then using a series of categories that arose from precepts upon which the overall fellowship was founded to provide coherence and consistency in the analysis of the available data. It was through these processes that the findings and deductions reported over the next four chapters were advanced.

## Key Findings

From this fellowship, five key sets of findings emerge.

Firstly, from the findings, it is clear that the integration of learning experiences needs to go beyond a consideration of the experiences provided in the physical and social settings in which students participate (i.e. workplace and educational settings), and needs to include students' personal processes of experiencing and reconciliation of what is experienced by learners 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, we need to add to this duo a consideration of students' personal epistemologies. Without consideration of how students engage with and learn from the experiences provided for them (i.e. 'enacted' curriculum) including the particular pedagogic practices, accounts of these core explanatory concepts fail to fully inform the nature of these learning experiences.

Thirdly, just providing practice-based experiences for students is insufficient to achieve the kinds of learning required to secure smooth transitions to practice, and the development of effective and critically-oriented professional practitioners. Instead, there is a need to enrich those experiences through preparing students for practice-based experiences, supporting their engagement and then providing opportunities for them to share and reconcile what has been contributed by these experiences.

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 professional practitioners. Such pedagogic practices are likely to be those that permit: (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 integration of experiences across practice and higher education settings, their ability to engage in professional practice and their becoming effective critical and reflexive practitioners.

From the project findings advanced above, some tentative pedagogic and curriculum considerations are advanced for promoting the integration of students' experiences in both academic and practice settings. These considerations are presented in overview and organised under three headings: those associated with what should happen before, during and after practice-based experiences.

### 5.3.4 Considerations for Curriculum

The sequencing of student experiences – firstly in the university setting, then in the practice setting, and then back to the university setting – provides a course of experiences that are fundamental to the concept of curriculum: the course to be run (Marsh 2004). That is, the intended set of experiences is, in part, enacted in particular ways and experienced differently by students. University teachers, course and program convenors can plan for, and organise, particular sets of experiences (i.e. the 'intended' curriculum), and these may be enacted with greater or lesser fidelity within university programs depending on shared understandings, resources, facilities and so on. However, what is enacted in practice settings is far more difficult to plan for or shape. Hence, within practice settings the 'enacted curriculum' seems to dominate, and its correspondence with the university-intended curriculum may be tenuous, and certainly cannot be assured. In addition, whatever is experienced in both settings is shaped by the students' prior experiences and learning. Certainly, their ways of experiencing the curriculum will be as diverse as their prior experiences. For instance, some student nurses have previously worked in patient care roles, including being an enrolled nurse, and may well 'experience' what is enacted in the university and healthcare settings in ways that are distinct from those who are entering the program from schooling. However, beyond the diversity of what constitutes the experienced curriculum is its centrality to learning. For many, the experienced curriculum is the most salient of curriculum conceptions, as it constitutes the process of student learning. Also, and taking this salience further, unlike the intended and enacted curriculum, this conception of curriculum not only focuses on the learner, but also the agency of the learner.

### 5.3.5 Considerations for Pedagogy

Just as it is important to expand on notions of curriculum when considering learning experiences across university and practice settings, it is also helpful to view pedagogy more broadly when considering how to support and promote student learning across both kinds of settings. Pedagogy is cast here in particular ways in both settings: one designed for, and enacted within, settings where student learning is held to be the central concern; and one in which the imperatives of practice are central. So, although the pedagogy of classrooms has not been the principal focus of this project, it is evident that pedagogic practices have the capacity to inform and prepare students for the practicum experiences, and to engage with them during those experiences and then assist reflection after them are likely to be useful. For examples, it has been found that approaches such as learning circles (Cartmel 2011), the linking of 'follow-through experiences' (Sweet and Glover 2011), by using reflective logs (Daunert and Price 2014), and reflective learning groups (Newton 2011) comprise pedagogic practices that can assist maximise and effectively manage

the continuity of learning experiences across the different settings and can promote effective learning about practice and also utilising and developing the agency of students. Yet, both of these views of pedagogy are concerned about the provision of experiences for students and their engagement with them. They each have a range of potentialities, not the least to be effectively integrated and complementary. It is these kinds of pedagogic practices that stand to provide support for students' negotiation of experiences across both practice and university settings. It is these findings, and contributions which are now elaborated in the following four chapters.

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# Chapter 6
# Key Findings About Integrating Experiences

## 6.1 Progressing the Integration of Experiences in Practice Settings

From analyses of the processes and outcomes of the 25 projects across the two teaching fellowships outlined in the previous chapter, it is possible to identify key findings that can inform how to effectively organise and enact education provisions that include and seek to utilise and integrate practice-based experiences. These findings are presented as suggestions to identify how best higher education students can be prepared so they are able to effectively practise their preferred occupation upon graduation. It also anticipated that such a preparation can extends to developing the capacities that will assist them to sustain that efficacy as they practise and continue to realise their personal and professional goals across lengthening working lives. The findings from the two fellowships are advanced here as a set of eight broad findings that are the subsequently presented in more detail and specifically in the three subsequent chapters focussing on curriculum (Chap. 7), pedagogy (Chap. 8) and personal epistemologies (Chap. 9). Importantly, while summarising the contributions of these projects, the findings also stand as a useful set of foundational principles for the planning, organisation, and enactment and evaluation of higher education provisions that seek to provide students with experiences in practice settings and then integrate them within their university programs.

In overview, these key findings are as follows:

1. Just having workplace experiences is insufficient: those experiences need augmenting
2. Preparing students for, supporting during and assisting connect experiences after the practicum experiences is important
3. Students' readiness (i.e. interest, realism, capacities) is central to how they participate and learn



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4. 'Time jealous' students present particular challenges in providing and managing educational experiences
5. The 'experienced curriculum' (i.e. how students construe and engage) is becomes central
6. That incremental exposure to practice-based experience and progression is preferred (i.e. a series of experiences being built upon, different levels of support over time)
7. Educators' conceptions of worth and competence with practice experiences are likely to be diverse and influence teacherly support
8. The importance of aligning all parties' understandings of purposes of WIL and its processes

Each of these propositions are presented and discussed in turn below.

## 6.2 Just Having Workplace Experiences is Insufficient: Augmenting the Experiences

The findings of the fellowship projects indicate that just providing students with or engaging them in workplace experiences alone is insufficient to develop the kinds of capacities needed for them to achieve the required educational goals. Instead, it is necessary to augment these experiences for students in ways that enrich them, promote their applicability and strengthen their outcomes for students as learners. Below it is proposed that the augmentation of experiences is associated with: (i) mediating novel experiences and avoiding dissonance; (ii) promoting applicability through making links and reconciliations; and (iii) supporting the reconciliation and elaboration of the knowledge to be learnt. Each of these forms of augmentation is now discussed.

### *6.2.1 Mediating Novel Experiences and Avoiding Dissonance*

The enrichment of students' experiences in workplace settings can likely occur through teacherly interventions and activities before, during and after the students' experiences in those settings (e.g. workplaces). Preparing students for these experiences, including their active engagement within those settings and supporting them during that time and activities within practice settings and then utilising those experiences after they have been completed, stands to enrich the learning potential of these experiences. Without these interventions and engagements, the worth of these experiences is potentially quite limited, and even potentially counter or non-productive. In essence, this teacherly mediation is about extending the scope of the students' zone of potential development (Valsiner 2000). That is, the scope of the learning that can arise through their own energetic efforts. To press them beyond

what is the scope of how they can apply what they know, can do and value requires guidance by more informed partners to be effective. This is sometimes referred to as extending the zone of proximal development, as attributed to Vygotsky. For instance, a positive experience in the workplace can be strengthened by having opportunities to identify bases of that experience and what led to satisfactory outcomes for students. Even when students have had unsatisfactory or negative workplace experiences, utilising those experiences in educational ways through intentional pedagogic activities can achieve productive outcomes. This intervention extends to those that are peer-led. Alternatively, even positive experiences can be augmented to realise stronger outcomes. Further, if students have negative experiences and these are not adequately mediated, the outcomes can be dire.

When students participate in practice settings, often they will be engaging in experiences that are novel for them. That is, quite different from what they have encountered before or within their university programs. Such experiences are likely to make particular kinds of demands upon them and stand to shape what they learn in particular ways, depending upon the specific activities and interactions in which they engage. As higher education students are engaged in the process of coming to understand and identify with a particular occupation, this experience may be quite counterproductive if the demands and challenges presented by both sets of experiences seem misaligned and taken as being contradictory and unhelpful. Students might experience high levels of dissonance in encountering and experiencing an environment and activities that are unfamiliar to them, for instance. Such an experience is unlikely to lead to the development of a coherent and actionable body of knowledge. Moreover, as Hodges (1998) suggests this dissonance can lead to dis-identification with the selected occupation. More widely, it seems many student nurses (Newton et al. 2009a) and teachers and others withdraw from their courses after negative practicum experiences. Indeed, these concerns were central to student-centred learning circles being used for social work students in the first of the two fellowships (Cartmel 2011). The impetus here was to both prepare and support these students in the event that they encounter confronting experiences during that practicum experiences.

### *6.2.2 Promoting Applicability Through Links and Reconciliations*

Indeed, it is quite likely that, in many workplaces, interventions will be required to assist students understand the applicability of what they have learnt in educational programs and how this relates to the aims and goals of their courses. Taking the opportunity to maximise these experiences and direct students' considerations of them towards what is the intended focus of their learning can be helpful. For instance, as elaborated in Chap. 8 (i.e. Pedagogic Practices Supporting the Integration of Experiences), strategies making explicit links between practices

of the work settings and what is being proposed within their courses can assist students develop richer understandings than if they are merely left to reconcile these experiences without guidance from others. Issues of confidence, being confronted, not understanding the relevance of what is experienced, and struggling to find alignments with their studies are all issues reported by students within these projects. So, more than locating and providing students with experiences in work settings, the findings suggest that for the potential of these learning experiences to be realised, it is necessary for there to be interventions to make explicit and promote the applicability of what has been learnt from experiences in workplaces, which is sometimes referred to as maximising teachable moments (Bailey et al. 2004). These interventions extend to reconciling the two sets of experiences for the students and drawing out meanings and procedures which may not be learnt through merely placing students in workplaces or practice settings.

### *6.2.3 Supporting the Reconciliation and Elaboration of Knowledge to be Learnt*

It is likely to be helpful to actively strengthen students' learning outcomes from their experiences by assisting them reconcile what they have experienced in both kinds of settings (i.e. those in the academy and workplace) and advance their knowledge accordingly. This strengthening goes beyond simply trying to unravel those experiences and make links with what the students have encountered in practice settings. It also applies to those within the educational settings. For instance, as noted above, this augmenting of experiences relates to assisting them understand what actually constitutes the occupation in action and how that enactment can differ widely across a range of practice settings. Moreover, it can furnish opportunities for students to consider and reappraise conceptions of their selected occupation and how they should come to engage with and learn about that occupation. In one project, many of the students had to confront the strengths and limitations of two distinct philosophies associated with the enactment of a particular occupation (Chiropractic project). These characteristics were discussed in terms of the relative worth of periodic interventions for assisting individuals' health in a remote and impoverished community (i.e. a stateless community in northern India). The opportunity provided for chiropractic students to discuss the merits or otherwise of engaging with these community members in assisting their health for a restricted period of time (i.e. 2 weeks) gave rise to not only an elaboration of two distinct philosophies about chiropractic work, but also the opportunity for the various merits of those philosophies to be appraised by the students. Subsequently, fundamental issues about what constitutes worthwhile chiropractic work were discussed using this example which many of the students had actually experienced. This discussion brought together the distinct philosophies of that occupation's practice.

All of these three sets of factors suggest that it is insufficient to merely provide students with practice experience, or that students should independently locate and engage in that practice experience, without support and guidance. Instead, it is important that these experiences are engaged with and augmented through their organisation and sequencing (i.e. curriculum practices) and then enriched through pedagogic practices as part of the overall educational provision. Rather than seeing these experiences as being largely extracurricular (i.e. outside of the intentional learning experiences) they need to be seen as being an essential element of it and treated accordingly. Whether referring to social work students who are being prepared for confronting work circumstances, chiropractic students debating the worth of interventions to address community members' health-related issues, or teachers having the opportunity to consider a range of schooling circumstances, there is a need to augment those experiences. Without these kinds of interventions, the learning potential of the experiences of those students is likely to be quite restricted and, in certain circumstances, could be deleterious. For instance, individuals having negative experience might withdraw or come to see and practice the occupation from restricted and unhelpful viewpoints.

## 6.3 Preparing Students for, Providing Support During and Assisting Connect Experiences

Following from the above, a key finding from across nearly all of the projects was the importance of: (i) preparing students for their work experiences, (ii) supporting them during those workplace experiences and (iii) then organizing activities after their work experiences for the sharing of those experiences with other students and also connecting the outcomes of those experiences with their program's goals. These three important findings are now set out here in preview.

### *6.3.1 Preparing Students for Their Work Experiences*

Many students had no or very limited access to or experience of their selected occupation in practice. Hence, these experiences can provide a greater understanding of what these occupations comprise in practice. Also, in many cases, because of their lack of understanding, students often approached their practicum experiences with concerns, anxieties and feelings of being unprepared for performing in those settings. This was perhaps never more the case than when students are being assessed on their performance in practice settings by practitioners or when asked to engage in activities which are quite unknown to them. They were aware that, unlike the relatively private nature of student assignments, that there would be a

public dimension to their performance and through which perceived or real failure to perform could have a high personal price (e.g. practice teaching). For instance, physiotherapy students were concerned about both what their supervisors might say and make judgments about their performance, but also how they would perform when they actually had to 'put hands on patients' for the first time.

Consequently, finding ways through which students can be adequately prepared and advised about the requirements for their practicums or other forms of workplace experiences is important. This includes them being prepared with the procedural capacities they need to be effective in those tasks and about the kinds of issues they are likely to face, which are helpful in informing the requirements for a productive initial engagement.

### *6.3.2 Supporting Them During Those Workplace Experiences*

Moreover, finding ways of supporting students during their practicum, particularly if they are long-term placements, is likely to be helpful in building their confidence and capacities, specifically when they initially engage in that work. These interventions may be important even in what seem like situations where plenty of support and guidance is available. For instance, student nurses report feeling isolated in busy hospital wards. Therefore, student-led discussion groups were piloted and taken up enthusiastically by these students (Newton et al. 2009a). Then, there is the provision for sharing experiences, through which to learn from others that can also be supported by teachers' interventions. This support can comprise arrangements made within the workplace, such as the provision of mentors, preceptors or supervisors who will support students and organize appropriate experiences for them and monitor their development. That support can also comprise organizing opportunities for students to meet during their practicum periods, either through a teacher-led process or one that students engage in and manage independently (Newton 2011). In particular, these kinds of experiences can provide the opportunity for peer support and collaborative learning activities through sharing, discussion and reconciliations.

Even in the most people-intense environments (e.g. hospital wards), some students reported being isolated and lonely and wanting to engage with their peers to discuss what they have experienced and are learning. This kind of peer support can be useful when students have had to confront difficult or demanding situations that are quite novel to them and they are not in a position to have developed confidence within the workplace setting. Also, because they are often peripheral participants (Lave 1991), they are prone to be engaged with minimally. It is the engagement with peers or their teachers that can well provide this kind of support which might be otherwise lacking. So, mechanisms that can support students during their practicum are likely to be welcomed and assist the development of the learning about their selected occupation.

### 6.3.3 *Organizing Activities After Their Work Experiences for the Sharing of Those Experiences*

Furthermore, after completing their practicum experiences, having the opportunity to engage with other students, to discuss, share, compare and contrast experiences and draw out meaning from them is likely to be helpful, for the reasons raised in the above section. Not the least here is the importance of students understanding something of the variations in requirements for work across different workplaces where occupations are practised. If through interactions with other students they can come to understand some variations of the occupational practice, the different kinds of goals that are seeking to be achieved and the different means of securing those goals across a range of professional settings and for what particular distinct set of reasons they are appropriate for their circumstances, can lead to the development of rich and applicable occupational knowledge. Both the knowledge of a range of goals and practices for each occupation and that there are variations in practice provide a foundation for students to understand that what they experience and are encountering is not the one and only way the occupation is practised. In particular, it may help them understand more readily the kinds of occupational practices that they will encounter beyond graduation. This is because these practices might be quite distinct from those they have experienced themselves in and through their initial occupational preparation program. Certainly, the need for re-engaging and utilizing fully those experiences were recognized early in higher education provisions that involved extensive periods of work experience. For instance, as noted in earlier chapters, from early on in the cooperative education movement in the United States it was understood that there have to be a specific opportunity for students to come together and share their experiences collectively, but also have opportunities for making explicit links between what they have experienced in the workplace and their courses of study. These activities were referred to as the co-op seminar (Grubb and Badway 1998).

The particular educational aims and goals for these post practicum sessions can be of different kinds. In the Co-op seminars, there was great concern to ensure that the kinds of discipline specific concepts and practices that were being taught in the students' course were principal bases for understanding experiences in the students' internships. However, such processes can also be used to help students identify and address what comprises important education intents such as understanding what constitutes the canonical knowledge of the occupation (i.e. concepts and practices which are common across the enactment of that occupation), variations in the requirements of practice premised upon situational factors (Billett 2001) and the culture of practice (Brown et al. 1989). That is, how the occupation is practised in a particular setting or the practice of communities (Gherardi 2009). These activities can also be used to assist overcome difficulties that students face in understanding factors associated with the practice, as well as being supported and sharing with others difficult and confronting circumstances. For instance, in one project, journalism students reported having quite different experiences in the

same workplace setting (Journalism project). It was only through the opportunity to discuss that workplace with their peers that it was realized that many of these differences were not based on factors associated with the students themselves or their performance during their placements. Instead, workplace cultural factors distributed the different kinds of activities and interactions available to the students, including in this instance how they were distributed on the basis of student's gender.

In all, it is suggested that preparing students for workplace expectations can assist them utilize their experiences effectively. This is held to be essential for enriching those experiences through provisions of initial support before students engage in the practice experiences, during those experiences and then once they have been completed them. An indication of the importance of such peer support is that when they are not provided by the educational institution, students sometimes organize them (Richards et al. 2013). While this is helpful and is to be encouraged, these processes often also benefit from the kinds of insights that teachers can bring and also when structured in ways which are generative of positive and shared outcomes which can be engaged with by the largest number of students. For these reasons, when there was support from the educational institution, in the form of group processes in which students could engage with peers in sharing, discussing and deliberating about their experiences in practice settings, they were often valued and engage with by students (Cartmel 2011; Newton 2011). Consequently, it is suggested that these kinds of mechanisms likely need to be adopted broadly to support and enrich students' learning processes, not the least ensuring that the learning is productive, utilizes a range of experiences and is generative of outcomes that can assist students understand and practice more effectively their occupation within and beyond that course.

## 6.4 Students' Readiness Key Factor Shaping Their Learning

The level of student readiness to participate in practice-based experiences was identified as being particularly salient. Readiness refers to the capacities of individuals to be able to learn from the experiences they encounter. That readiness is found in what individuals know, can do and value. So, more than conceptual, procedural capacities, it includes how they elect to engage with what they experience. From the fellowship projects, the following findings about readiness were identified: (i) extent of foundational knowledge; (ii) student interest and agency; (iii) degree of realism and awareness; (iv) person-dependence; and (v) situational awareness.

### *6.4.1 Extent of Foundational Knowledge*

In some accounts, readiness is seen as a quality that learners will obtain when reaching a particular state of psychological maturity. That is, having the cognitive capacity to comprehend and utilize the particular set of experiences that they

encounter. So, for instance, Piagetian developmental theories (Piaget 1976), the developing child moves through a series of stages and the extent of their cognitive capacities (i.e. how they think and can act) are premised upon their stage of biological development. Here, however, the concept of readiness is cast more broadly. It relates to the degree by which learners are able to engage with new kinds of experience and participate productively within them, thereby considering those experiences and adapting to what they know, can do and value, and securing rich outcomes through their negotiation of that experience. For instance, for the journalism student who, when confronted by a copy editor stating that the active voice and present tense is required in articles for press releases, their readiness is premised upon understanding the difference between passive and active voice and different kinds of tense. It follows that students' conceptual readiness to engage in these experiences is likely to be quite central to the quality of their learning.

It may well also be important for students to possess the kinds of procedural capacities (e.g. skills) required to perform tasks in practice settings. That is, they may have had to acquire particular capacities required to engage effectively or productively in workplace tasks in such settings. Given the diversity of potential experiences, expectations and requirements of practice, the task of securing this readiness may be as simple as providing a series of occupationally specific procedures such as sometimes occurs in clinical skills laboratories universities. Nurses and others engage in clinical laboratories to develop their procedural competence for standard occupational procedures (i.e. suturing, dressings, inoculations, lifting patients. etc.). Often, in those settings, there are experiences to assist student nurses rehearse conducting a series of procedures on patients using mannequins. However, the kind of activities students will be undertaking will probably differ and, therefore, the extent those capacities will be required might vary across work situations. Hence, the kind of educational goals that are being expected, as well as expectations of performance within practice settings will likely differ (Billett 2001). For instance, students engaging in practice-based experiences to orientate themselves to the occupation (i.e. what a nurse does) or some variations of it (i.e. what nurses do in different kinds of hospital wards) may participate in ways that engage them in less intense activities when they are participating to developing their procedural capacities (i.e. how nurses perform particular procedures with specific kinds of patients – taking blood from children, and adults). Regardless, the development of these kinds of capacities assisting these students be effective in the practice settings will likely be very important for students' readiness to be successful in their practice in those settings. That is, competence and confidence may be entwined here. Yet, in addition, there may also need to be other skills developed, such as the capacities to work in teams and inter-professional teams. The development of these capacities may require particular kinds of preparation (O'Keefe et al. 2011). It is often these kind of capacities that, whilst readily recognized as being important, sit somewhere between different courses and are not always easily able to be understood and effectively integrated through experiences in educational programs. Hence, these kinds of capacities likely need to be the focus of preparatory experiences to assist students are ready to maximize their readiness to engage effectively in their practice-based experiences.

### 6.4.2 Student Interest and Agency

Central to human learning is the extent to which individuals exercise their energy and interest and the direction of their intentionality when engaging in goal-directed activities and interactions as is required for conscious and effortful learning (Malle et al. 2001). It is these qualities that likely shape how new learning for students is achieved and the extent to which what they know comes to be applied, enhanced and extended. All of this is shaped by the learners' interests, agency and epistemological beliefs (Hofer and Pintrich 1997). Perhaps more than in most educational processes, students' participation in practice-based experiences are undertaken in a relatively independent way, and are therefore more based on their capacities and readiness as active learners, than when being taught (Campbell and Zegward 2015). This is because these experiences engage students in learning-related activities that are independent of those who teach and the kind of processes used in educational institutions with which they have become familiar and well-practiced. The degree of interest in students' selected occupations and their sense of self will likely shape the energy and level of engagement in the particular activities in which they engage in workplaces and, as a consequence, what learning will likely arise for them (Newton et al. 2009b). In this way, the readiness of students as learners will shape how that agency is exercised when engaging in learning through and from what they experienced in the practical experience. Ultimately, that learning will be shaped by what they already know, how they come to know and the ways in which they construe and construct what they experience (Billett 2009a). All of these factors are associated with their readiness in terms of existing knowledge, interest and the exercise of that agency. Students who are uninterested in the particular experiences they encounter in practice settings, or are distracted by other priorities or elect not to engage effortfully with what is afforded them in those settings, may not engage effectively, nor learn richly through the same set of experiences as those whose interests, capacities or understandings are more aligned with what has been experienced.

### 6.4.3 Degree of Realism and Awareness

Readiness also extends to being reasonable and fair about the processes and outcomes of such engagements: being realistic. Students may need to be circumspect about what they can achieve and manage, in terms of both their own expectations and those of others. On the one hand, there can be high levels of enthusiasm which might need to be moderated for students to engage effectively in practice settings. Students with unrealistic expectations about the scope of activities they can participate in or what they might learn through these activities may lead to difficulties with and potential frustrations in the practice settings, if they do not believe that needs are being met. On the other hand, there is also a need for

students to mediate and manage the kind of activities in which they engage and make judgments about what is beyond the scope of their developing capacities. For instance, in the midwife study, it was found that very inexperienced students were being given tasks to undertake (e.g. holding the baby's head on birth) which was probably beyond the scope in which these students could safely practice (Sweet and Glover 2011). Here, the two sides of being realistic are exercised. Firstly, it is important to be reasonable about the kinds of activities that students might expect to be engaging in, and also having the capacity to advise co-workers that such a task is likely to be beyond their capacity without very direct guidance from a more experienced co-worker. Indeed, such requirements might place students in positions in which they are uncomfortable. All of these personal bases for engagement emphasize the importance of adequate preparation, including briefings about what is the reasonable scope of activities and how students may need to be ready to negotiate these, as well as the importance of being realistic about what can be achieved by and expected of students in practice settings.

### *6.4.4 Person-Dependence*

Students are not homogenous in terms of how they think, act and learn. They will have different levels of readiness in terms of what they understand, can do and value, and interest to do so. Within any cohort there will be a range of kinds and levels of experience, some of which will include occupational activities. For instance, in nursing programs, whilst many students are school leavers who lack nursing experience, they are also often nurses who have previously been nursing assistants or enrolled nurses and are progressing through to be fully qualified nurses. The two cohorts often have had quite different experiences (Newton et al. 2009b). Often, the former will have had success in schooling and approach their nurse education program with confidence that they have the capacities required to be successful as higher education students. However, they may be less confident about the tasks of nursing patients. Conversely, the enrolled nurses may have a lot of nursing experience, yet may be concerned about their capacities to meet the requirements of the university course, such as assignment writing. The latter may seek to demonstrate their competence in practical sessions and skills laboratory activities and in ways that attempt to compensate for the lower levels of writing skills. So, there may well be quite distinct kinds and levels of readiness to participate in higher education programs within the same student cohort.

### *6.4.5 Situational Awareness*

These differences in readiness, as noted, may well lead to particular kinds of experiences being provided for particular groups of students, so that they can effectively participate in higher education programs, and practicum experiences.

One consideration is of how great or deep is the scope of their learning. For instance, in one project, where the focus was on students' learning about social work, there was a particular concern about the readiness of newly arrived overseas students (Social work project). Quite a few of these overseas students came from countries that do not have social welfare systems or social workers. Therefore, the students had limited understanding about societal values and structures that support and administer welfare and social support, the kinds of agencies that existed to support social welfare provisions and the kinds of roles that social workers perform. Hence, not only was the students' understanding of the occupation to which their studies were directed quite limited, but also of the social and societal context in which that work needed to be undertaken. Moreover, in this higher education program, students engaged in practicum work from the second week of first semester onwards. Consequently, the project focused on how these overseas students could be provided with experiences at the beginning of their course that allowed them to understand the role of social workers, the kind of institutions in which they work, the kind of institutions that support individuals who may well be the focus of social work practices, and understandings about the obligations of society to those who are ill-placed to fend for themselves or whose circumstances have become overwhelming. Hence, it was necessary to develop further the readiness of students prior to engaging in practicum settings. Yet, it was also commented that assumptions might be made about the levels of understandings held by domestic students about the very same set of factors. These are, what social workers do, the institutional structures and programs available, and the ethos of social welfare provision within a society which is expecting citizens to be increasingly less dependent upon the state. Put simply, many domestic students came from circumstances where they had little if any exposure to the social welfare system themselves.

All of these factors associated with students' readiness in terms of their interests, realism, capacities and prior experiences should be considered in terms of the organization of overall experiences (i.e. the curriculum) for students because they will be central to the experienced curriculum (i.e. what sense students make of what has been provided for them and how they elect to engage with it). In addition, particular pedagogic practices can be used by university educators and practitioners to develop the procedural capacities, understandings and values that will assist students be effective in their learning experiences within practice settings.

## 6.5 Challenge of Providing and Managing Experiences for Students Who Are 'Time Jealous'

Making effective use of students' time has become a key concern within contemporary higher education. The findings from the fellowships indicate that the following needs to be considered in the organisation and implementation of educational provisions: (i) students are often 'time jealous'; (ii) need to utilise students' time

effectively and (iii) securing students' engagement with educational activities and interactions. These three related sets of concerns are now briefly introduced.

### *6.5.1 Students Are Often 'Time Jealous'*

It is often claimed that higher education students are 'time poor'. That is, because of their need to work part-time, to travel and fulfil social, economic and other obligations, contemporary students are left with limited time for their university studies. This situation has been decried as leading to students not engaging fully in university life. This includes their lack of engagement in kinds of interactions and activities that previous generations of university students have enjoyed. Indeed, rightly or wrongly, the perception is that many and perhaps most contemporary students are only fleetingly on campus and attend only those lectures and tutorials that are subject to attendance monitoring or assessment. All of this 'time poorness' is exacerbated in those higher education programs that make further demands upon the students' time through practicum or mandated periods of workplace experiences and requirements to fulfil the obligations for professional endorsement. Together, these commitments can make further demands on students' time. So, contemporaneously, there is an unhappy coincidence between growing expectations and demands upon student time for practicum placements and work experience, on the one hand, and students' wanting and needing to engage in part-time employment and also maintain a social life and interests on the other.

Moreover, the findings from some of the projects indicate that more than being 'time poor' many of today's higher education students are, more precisely, 'time jealous'(Allied Health, Midwifery projects, etc.). That is, they jealously guard and manage their time, including that allocated to their studies. The difference between being 'time poor' (i.e. not having enough time) and being 'time jealous' is quite distinct. The latter means that students are now more likely to be actively and critically evaluating demands upon their time made by their university studies. They then respond to these demands according to those aspects or activities they view as being worthy of their investment of their time. In particular, as long recognised, students are most likely to direct their energies towards tasks associated with meeting immediate goals, such their assessment tasks, and giving less regard and attention to other tasks which are not the subject of such demands. Hence, much of higher education curriculum is assessment driven. Similarly, within these projects, where there was a requirement for students to demonstrate competence in practice, this also attracted their attention and directed their energies. Yet, being 'time jealous' goes further than this. It is central to the time, effort and intensity that students allocate to their studies: i.e. what and how they will learn. That allocation of time is likely most directed towards very immediate outcomes. Moreover, ultimately, as the quality of individuals' learning arises from the effort they exercise in how they construe what they experience and then construct knowledge from it, if they are

parsimonious with that effort and engage only superficially, quite likely the learning arising will reflect that effort and engagement.

This issue of student 'time jealousy' was evident in many of the projects. This included resentment at time spent on these activities and strong dissatisfaction when they were asked to undertake activities that had no academic credit value or made unreasonable demands. For instance, students in an engineering program were expected to engage in 600 h of work experience to qualify for professional registration that was built into their degree (Engineering 1 project). So, for many students this demand to engage in voluntary work came at the cost of their paid employment, which for some was a necessity not a nicety. However, this 'time jealousy' was most starkly evident in one of the fellowship projects in which students in three fields of healthcare (paediatrics, podiatry and prosthesis) were requested to attend a 2-day orientation program to prepare them for, support them in and enhance their forthcoming practicums in healthcare settings. The program was held in orientation week. The process and content of the orientation program was premised on one that had been effectively enacted within the same faculty in the previous year for physiotherapy students. However, much of the student feedback about this program was very uncomplimentary and critical. Students reportedly resented having to attend such a program in orientation week, and pointedly indicated that their attendance had come at the cost to other commitments, principally paid employment and recreational activities. They were also highly critical of any element of the program that was not directly pertinent to activities they would be engaged in the coming semester, and in the next few weeks of that semester. Anything outside of their own specific discipline was deemed to be irrelevant and a waste of their time in having to hear about or consider it. Of course, there are likely to be some legitimate bases to some of these criticisms, including whether this activity should have come earlier in their study program.

In this way, the implications of student time-jealousy are quite far reaching for higher education. They include a basis upon which students will participate in learning experiences both within and outside of university settings. Consequently, experiences such as those provided through practicums and the like, which often come on top of what is held to be the allocated time for each course, might well be the target for students to be even more strategic about the allocation of time and effort. Of specific concern is the narrow and presentist focus students might be adopting. Whilst this is understandable from their perspective, because of demands upon their time, it may not be the best vehicle for the kind of more broadly applicable and expansive learning that is supposed to arise from higher education. Moreover, vociferous and aggressive responses from students to any additional demands may well lead to the reshaping the goals of the curriculum in terms of what can be expected students will do, and strong criticism of teachers who are perceived to expect too much from students. Furthermore, such approaches and bases of engagement are likely to shape how students engage with what is provided for them and, as a consequence, what they come to experience and then learn from their experiences within higher education provisions.

### 6.5.2 *Securing Students' Engagement with Educational Activities and Interactions*

The tendency for students to allocate time according to personal needs and immediate imperatives, including those required to complete courses, is hardly new. Yet, one of the key qualities of occupations that are designated as being professional is a requirement for higher order thinking, which is likely common to all forms of work. Indeed, the massiveness of the knowledge required for those particular occupations is probably what sets them apart from others (Winch 2004). It follows that the process of learning the breadth and depth of the knowledge required for many of the professions, and many other occupations, necessitates graduates engaging in effortful learning of that knowledge and being willing to exercise considerable energy, time and intentionality in achieving that outcome. The simple point here is that demanding kinds of learning requires effortful engagement by those who are engaged in it. Consequently, if students are unwilling or attempt to avoid engaging in this kind of learning, they are unlikely to develop the kinds of capacities required to qualify for and practice those occupations effectively.

More broadly, the phenomena of time jealousy is a clear indicator that beyond what experiences are provided for students both in university and workplace settings, ultimately the quality of outcomes will be dependent upon how students are able or select to engage with and learn from these experiences. Notably, in reflecting upon three decades of research into how people develop expertise in their field, Ericsson (2006) identified what he refers to as 'deliberate practice', as being essential for high levels of human performance. That is, beyond what is offered individuals in terms of opportunities and experiences, a key quality of those who are highly adept at what they do is the degree by which they engage in effortful engagement and practise within the domain of knowledge they are learning. This then is a process that is intentionally undertaken and exercised by individuals. Therefore, unless students are given justifications for what they have to learn effortfully, their learning may not be as effective as is required. It seems that making the purposes and salience of content explicit is likely to become a key concern. Unless students assent to the importance of the knowledge that they need to learn, they are unlikely to come to direct their time and effort into deliberate practice or other focussed learning activities.

It follows that, unless the circumstances for young people change and they have no need to engage in paid part-time work and are not distracted by social and family life, managing time jealous students' learning may become a key challenge for those teaching in higher education. This is likely to be particularly the case when their programs include periods of practice-based experiences which place pressure on the time they have for other activities. Moreover, this circumstance reminds of the importance of the most fundamental consideration for educational provision, and that is making explicit and justifying why particular learning is important and finding ways of maximising student time and utilising their energies to the fullest to assist in learning.

## 6.6 Salience of the 'Experienced Curriculum': How Students Construe and Engage

From the consideration above about student readiness, capacities and interest, is the conclusion that, beyond what is intended, students will learn by those who design and order their programs of study, sequence courses and select the content to be taught within those courses, and beyond what educators enact in terms of experiences in both in the university and practice setting, is how students come to experience and learn from what is intended and provided by higher education institutions. The latter constitutes the 'experienced curriculum' (Billett 2011). The findings here are discussed in terms of the: (i) importance of the 'experienced' curriculum; and (ii) centrality of student engagement.

### *6.6.1 Importance of the 'Experienced' Curriculum*

A foundational and enduring concern for education is what students come to experience through their participation in their program of study and from which they learn. This experience is, therefore, central to any provision of education, but particularly those in which experiences are provided in different kinds of settings, to achieve a specific educational purpose. As noted earlier, of the three concepts of curriculum that are adopted here to explain and evaluate provisions of learning within higher education: (i) the intended curriculum – what students are expected to learn through the organization of sets of experiences; (ii) the enacted curriculum – what is provided for students through the implementation of the course and (iii) the experienced curriculum – the sense students make from what is provided for them and what they learn from it, and in this way, the importance of the third conception becomes paramount. There is no simple process of knowledge presentation and subsequent construction by learners (Lave 1993), as in the transmission of knowledge.

Instead, it is learners (i.e. students) that construe and construct (i.e. learn) from what they experience (Billett 2009a). This includes students making judgments about the worth of what is being presented to them and how they go about engaging with what is being afforded them, and how they learn from those affordances. Students may engage in the process of knowledge construction on the basis of being more or less informed about what is important and what is less important in what they are experiencing. These kinds of processes play out regardless of the effort, agency and intentionality, including the direction of learner agency that students elect to exercise. Consequently, the 'experienced curriculum' becomes central to what is learnt, as do students' person epistemologies, which shape and direct their learning.

It is important to be reminded here that educational provisions are nothing more or less than an invitation to change. It is the degree by which the students take

up the invitation they are offered and what they do with it that is central to what they learn. This consideration perhaps plays out most forcefully within educational provisions that engage students in a range of social and physical settings from which they are intended to learn. Each of these settings has distinct bases for performance, makes different demands upon learners and in ways they and their teachers might not have anticipated and find challenging, and may be inconsistent with their expectations and even the course requirements. All of these considerations are slightly contrary to other trends within higher education, such as those in which students' intended learning is aligned with national statements of occupational competence within which students are being asked to demonstrate competence (Grealish 2015; Hungerford and Kench 2015). That is, considerations and requirements external to education institutions, students' experiences and expectations necessarily become the focuses of educational intents. Consequently, the 'experienced curriculum', the basis of how students construe and construct what is afforded them, becomes a far more central concern than is perhaps what is currently acknowledged. This may be particularly the case when there is an assumption that what is taught is learnt, as all too often is the understanding which external sponsors possess. This is why it is important to emphasize the constructive role played by students in their learning.

### *6.6.2 Centrality of Student Engagement*

it follows from what has been emphasized above and restated here is that how students engage what they know, can do and value with what they experience is essential to how and what they learn. Hence, student engagement is a central concern for any educational provision. Yet, this process of experiencing is, in many ways in by degree, person-dependent, and shaped by individuals person epistemologies (Billett 2009b). The process of experiencing will, therefore, be related to individuals' prior experience and also the way in which the experiences occurring, including opportunities to engage with others about what is being experienced. Whilst focusing on student activities, this is not to assume that their engagement and learning is beyond the control of and, therefore, not the responsibility of educators. Instead, it suggests that providing particular kind of experiences is necessary to make the worth of those experiences plausible for and engagement in by students. Consequently, particular aspects of the content may need to be emphasized and managed carefully to ensure that students engage with that content, and be encouraged to engage with it. A commonly used device, for instance, is for assessment tasks to be structured to address the key issues which those teaching in universities want learnt. This is a practical and helpful approach for directing students' attention. Yet, other means of engaging students effortfully and with clear intent now also become necessary. Students report being highly and intentionally engaged in experiences that will prepare them for tasks in which they are required to demonstrate competence, perform publicly, or otherwise secure specific outcomes. These kinds of engagement can become a key consideration for

both the intended and the 'enacted curriculum'. Certainly, the more that is known about students' needs and readiness the greater the prospect for alignment between what experiences are being provided and the kinds of learning which are intended to arise.

For instance, one of the student-related concerns that was reported in the 20 projects of the second fellowship was a preference for engaging in work and practice settings incrementally and in ways which allowed them to progressively engage in and learn through in the activities and interaction of settings. This is the focus of the next section.

## 6.7 Incremental Exposure to Practice-Based Experience and Progression Preferred

Certainly, student responses to preferred means of engagement within practice settings consistently emphasized the importance of incremental exposure to their engagement in practice-based experiences. That is, despite there being a range of different purposes to engage students in practice settings, there was a commonly reported preference for incremental engagement in these settings. Students proposed there should be incremental exposure in terms of the demands and duration of those engagements and kinds of activities in which students engage. Hence, regardless of whether learning about the occupation, variations of the occupational practice, or developing the capacities to be effective in that occupation, gradual exposure to practice settings and incremental engagement in occupational tasks were helpful. In many ways, this finding legitimates students' requests that their engagement with practice-based experiences is gradual and commensurate with their readiness. The rationale for this incremental exposure to workplace activities is fourfold: (i) novelty of experience; (ii) addressing issues of confidence; (iii) use as an organizing principle and (iv) developing occupational capacities.

Firstly, for the majority of students in these programs, their experiences in physical and social setting of workplaces work settings presents them with something which is quite novel. Hence, a process promoting gradual engagement with these settings and their activities may well be how to assist students being overwhelmed by totally new experiences and multiple demands that can lead to a dissonance rather than effective learning. This gradual engagement can address the level of readiness of students to engage in and make sense of the environment and its activities, not the least of them being identifying and reconciling these with what has been experienced in the educational setting. It is also understood that much of learning through engagement in particular social and physical settings is through the process of mimesis (i.e. observation, imitation and practice) (Billett 2014b), which requires an opportunity to make sense of the work environment, come to understand the requirements for performance and then come to consider how they might be realized.

Secondly, some students referred to issues of a lack of confidence, elements of anxiety and concerns about the requirements for performance in practice settings and the demands these practicum arrangements made upon them. For instance, students in a business school of one university reported not being confident about undertaking small projects for host workplaces (Commerce project). The lack of competence in performing procedures on patients or clients was, for many students, outside of their prior experience. Therefore, the more incremental approach provides for opportunities for students to become familiar (i.e. through observation and engagement in peripheral tasks) within the kind of settings in which they will need to perform, learn initially about performance requirements without having to perform them immediately. This moratorium allowed them to become more familiar with environments that are wholly novel to them before engaging as an effective participant. This process of becoming familiar can include simply understanding the physical layout, social relations and hierarchies and also clients or other workplace demands that might best be understood before students engage directly with them. The issue of confidence also emphasizes those raised above about learner readiness and having the capacities to perform effectively in these kinds of settings.

Thirdly, incremental engagement in workplaces also provides a basis for organizing interventions within the educational setting that prepares students procedurally (e.g. with the capacities they required to perform particular tasks), to understand the requirements for performance within these settings and to gain confidence in performing in an environment which is novel to them, yet often requires them to perform in quite public ways. Consequently, opportunities provided through incremental engagement in work-related activities can do much to manage the development of students' sense of self and efficacy associated with their selected occupation. Through such engagement there is the potential to develop these attributes in productive ways, rather than being overwhelmed and leading to negative consequences for learners in terms of their confidence, sense of self and desire to take this occupation as their vocation. It is also understood that individuals' effective engagement with new activities and tasks likely arises from success with those tasks and abilities to be able to apply them effectively. For instance, the literature on teachers' professional development indicates that commitment to particular practices for innovations arises through successful application far more than mere enthusiasm (Mclaughlin and Marsh 1978). As a key goal for occupational preparation is that individuals will come to accept their selected occupation as their vocation (i.e. their assent to it being what they want to engage in this come to identify with). Therefore, providing the means for that development in ways that are incremental, measured and more likely to provide successful outcomes need to be emphasized within the ordering of students' experiences (i.e. the 'intended' curriculum). This includes how they are prepared for activities in practice settings.

Fourthly, this incremental engagement is fundamentally consistent with an approach to developing occupational capacities that has been rehearsed over a millennium or more (Billett 2010). Historical and anthropological studies provide clear evidence of the ways in which incremental and measured engagement in occupational practice has been an effective curriculum principle in the devel-

opment of occupational capacities across humanity and cultures (Billett 2014a). Historically, across occupations, including professions, the development of the capacities required to enact occupations have been developed through the practice of them. For instance, in Hellenic Greece, the process of preparing individuals to engage in the profession of medicine was premised upon learning through practice alongside a more experienced medical practitioner and incrementally engaging in more demanding tasks. Medical students were positioned as assistants assigned specific roles in working with patients that assisted them learn medical practice (Clarke 1971). Similarly, anthropological studies indicate the learning curriculum, which likely is the most utilized form of any curriculum, essentially comprised of a pathway of experiences that incrementally engaged learners in increasingly complex activities that were consistent with their readiness to engage in the next level of activities (Lave 1990). Consequently, there is nothing particularly novel about incrementally introducing students to occupational practice. Indeed, it constitutes a fundamental and practical consideration within curriculum and also pedagogy. As such, it is highly consistent with long-standing beliefs and practices about how students' learning of an occupation needs to be supported to progress effectively. That is, through organizing experiences aligned with students' readiness to engage and learn, and then build on that level of readiness.

In sum, this concern about incremental engagement brings together two important propositions. The first is student readiness to engage in effective learning experiences and their progression along the pathway of learning experiences in which they can engage productively. The other is the alignment of what needs to be learnt with the kinds of experiences that are organized for students. These two concerns seem salient to offering experiences that can be used to effectively integrate practice-based experiences within higher education programs. However, achieving these goals may be more difficult in work-integrated learning experiences because those involved in organizing, providing and extending experiences to students in workplaces largely do so outside of the control and influence of education institutions. Therefore, the two final propositions underpinning effective work integrated learning experiences comprise attempts to align all parties' interests within these kinds of experiences.

## 6.8 Educators' Diverse Conceptions of Worth and Competence with Practice Experiences

The actions and behaviours of those who teach in higher education and the degree by which they support the integration of experiences in practice and academic activities are likely to be a factor in their effectiveness. Yet, not only are students 'time jealous', but those who teach in universities have increasing demands upon their time and are often required to become strategic in how they engage with their work activities and use their time. Consequently, the degree by which educators

believe the time spent in organizing students' practical experiences, and also providing opportunities to augment and enrich what students learn through those experiences is worthwhile, will influence the effort and intentionality they direct towards these activities. Therefore, unless teachers believe practice-based activities are worthwhile and legitimate learning experiences and should be integrated within the overall curriculum of the program, it is unlikely they will enact arrangements to intentionally maximize students' learning experiences to achieve that outcome. At one level, the findings from the fellowship projects indicate the worth that educators place on these kinds of experiences can be quite central to the kinds and qualities of experiences they provide and organize for their students. This consideration of experiences extends to the effort they expend in being innovative in their approach with students and finding ways to most effectively utilize students' experiences in practice settings. What was noteworthy in many fellowship projects was that members of the project teams understood the value of these experiences and were keen to use and maximize them as part of their teaching. However, it would be naive to assume that such sentiments are universally embraced by teachers within higher education.

At another level, there are also going to be distinct considerations by educators about how these activities are engaged with, for what purposes and through what means. This consideration is likely to be shaped by the kind of understandings and procedural capacities educators possess about learning processes and outcomes. Even the most enthusiastic and committed of educators may not be able to fully utilize and secure optimal outcomes from students' experiences unless they can effectively organize or enact learning activities for them. This consideration for the enactment of the curriculum may include finding ways of bringing students together in groups so that they can share their experiences, consider what they have learnt in practice settings and identify how this learning relates to the goals of their university programs, and, of course, the occupations for which that being prepared. Being judicious and careful about the kind of interventions undertaken and how they are managed likely arises through an informed understanding of and experience with such processes. For instance, those experiences focused on teaching or telling, however well-intentioned, may not provide the kinds of opportunities learners require to consider what they have experienced and to reconcile it productively with their higher education studies. Not all educators have these kinds of interests or capacities, nor possibly the kinds of sensitivities associated with permitting students to engage in peer-led processes and understanding how such processes need to be organized and managed to be effective. The evidence from one study, which focused on the perceptions of university teachers within the same discipline (i.e. business) provides an instance of there being diverse views about the worth of practice-based experiences, the likelihood of effort being expended to engage with and utilize those experiences, and the presence of the kind of capacities needed to effectively utilize those experiences. Fundamental issues associated with the valuing of teaching experiences (i.e. the development of conceptual over procedural knowledge) and of the purposes of higher education (i.e. a focus on informed inquiry rather than teaching occupational capacities) and how these activities are

rewarded within higher education institutions will likely influence educators' efforts for providing and enriching practice-based experiences.

As foreshadowed here and as elaborated in later chapters, the bases upon which students can be prepared adequately for practice-based experiences, the degree by which they can be supported when engaging in them, and then provided with experiences through sharing and reconciling what they have learnt within that program, are all quite central to the effectiveness of students' experiences in practice settings. This extends to their ability to develop the understandings, procedures and dispositions that will assist them perform effectively in their occupational practice beyond graduation.

All of this goes to suggest that there will inevitably be quite different responses from teachers in higher education and that it may be necessary to develop further some of those teachers' capacities to effectively utilize students practice-based experiences and assist the students reconcile what they have learnt through those experiences as directed towards their course outcomes. The capacity of these educators to effectively utilize those experiences and also to understand that teaching alone may not be the most effective approach to assisting students learn adaptable occupational capacities. So, although some of the propositions focus on the kinds of experiences provided within the programs, the positioning of students within these arrangements and promoting their engagement, the views and values of educators, and their capacities to organise and sequence effective experiences, and then provide appropriate pedagogic practices, should shape the quality of students' learning experiences both in practice settings and then in the integration of those experiences within their overall higher education curriculum.

## 6.9 Importance of Aligning All Parties' Understandings of Purposes of WIL and Its Processes

Although an unobtainable ideal, but one worth trying to work towards, is having consistency in understanding of the goals, processes and responsibilities across all of the parties involved in providing students' experiences in practice settings within higher education programs. When there is common understanding amongst workplace practitioners and supervisors, teachers in higher education and students about the purposes, processes and desired outcomes of these experiences, the prospects of decision-making in organizing learning experiences, how they are enacted and experienced are most likely to be consonant. In utilizing practice-based experiences, the shared understandings amongst the various parties can lead to greater confidence about what is feasible, possible and reasonable in the provision of those experiences and how they might be supported in workplace settings. Moreover, the means by which these experiences will be enacted in both educational and practice settings can also proceed with greater confidence and be informed by an understanding of expectations, roles and activities across both settings. Furthermore,

a shared understanding of team roles and expectations are important for those who implement and experience: workplace practitioners, university teachers and students.

Nevertheless, securing such consonance is not easily realized and needs to be continually worked upon and maintained. It also likely requires institutional arrangements which engage partners and develop mutual working relationships. For instance, in the German dual system, where such mutuality seems to be central to the effective provision of apprenticeships, the relationships amongst industry representatives, those of particular enterprises and educational practitioners are premised and enacted through co-operation and shared understandings about what needs to be achieved. Hence, being able to arrange particular kinds of experiences within educational institutions and workplaces in ways that are informed about what experiences apprentices are having elsewhere, and what might be expected of apprentices at particular points of time in their development. These premises become operating principles through which the provision and integration of practice-based experiences progress and are supported both institutionally in the workplace and educational institution and are valued and respected (i.e. legitimated) through the mature relationships founded on a valuing of the importance of skill development.

The development of such arrangements is far easier in some occupations than others because of historical precedents, cultural practices and also institutional factors. For instance, traditions in nurse, law, medical and teacher education often lead to well-established partnerships and practices that can lead to the kind of understandings referred to above. However, these kinds of arrangements may be less evident and more highly differentiated and distributed in occupations and sectors that lack a history of the provision of these kinds of experiences. Where these kinds of partnerships between educational institutions and those outside of them are best developed and sustained appear to be when they operate on a collaborative basis. That is, rather than one dominating the other and also when each of the partners is willing to make concessions to the overall purpose of the educational program. For instance, in the German dual system referred to above, workplaces provide experienced and skilled workers who act as meisters for apprentices and often invest considerably in apprentices' development (Deissinger 2001). Moreover, reciprocally, whilst receiving and expecting to receive an effective apprenticeship experience, apprentices are remunerated at relatively low levels of pay compared with their adult counterparts. These arrangements reflect the reciprocity in the relationship between the workplace and the learner: support and commitment on the part of the employer in developing the capacities of the apprentice, and an acknowledgement by apprentices that they are learners and are receiving an effective preparation. Of course, not all of these arrangements are ideal or practised as intended. However, the principle of reciprocity seems important. In studies examining the working relationship between educational institutions and workplaces and other organizations in the community, it has been found that when each of the partners is seen to be working in the interest of the general community

that engagement with and commitment to the educational provision being shared with the community and its enterprises is strongest (Billett and Seddon 2004).

It would seem that building these kinds of arrangements is on the minds of many higher education institutions as they seek to firm up their relationships with enterprises that will accept their graduates and engage with the university in other kinds of productive relationships, such as research. However, it may well be that it is at the operational level (the places where students will engage in practice-based experiences) where the common understandings and engagements are likely to be the most important.

## 6.10 Key Propositions for Organising Enacting and Experiencing Work Integrated Learning

In sum, this chapter has sought to identify some of the key findings that can inform teachers in higher education work in promoting student learning through practice-based experiences that were identified across the 25 projects that comprised those fellowships. This chapter has presented a series of broad findings from these fellowships, advanced as a set of broad propositions that are proposed as shaping considerations for how the organisation enactment and experiencing of practice-based experiences can be utilised and integrated within higher education programs. The eight propositions advanced above variously relate to the augmentation of students having workplace experiences, as, on their own they are insufficient, the importance of students being prepared for those experiences, a consideration of students' readiness to engage in and learn effectively at particular points in the development, and the important requirement of considering students as active learners who are also directed by other needs and priorities. Such a consideration is salient here because perhaps the most important educational process is what is referred to as the experienced curriculum: students' experiencing of what is provided for them and how and what they learn from that experience. To respond to this important factor, it is necessary to consider and organise students' engagement in practice experiences in ways that are incremental and offer experiences that are associated with the readiness (i.e. ability to effectively engage). Beyond students' interests and bases for engagement is that of teachers in higher education themselves on how the capacities and interests will be directed to engage in organising and utilising practice-based experiences. Finally, there is the important proposition, however idealistic, that needs to be worked towards of trying to align all of the understandings and interests of those who are involved in organising, implementing and experiencing practice-based learning opportunities. Together, these propositions stand as some bases through which considerations of curriculum, pedagogies practice and also students' personal epistemologies can progress.

Indeed, in the next and subsequent chapters, more specific findings and recommendations are made which focus upon consideration of curriculum practices,

pedagogic practices and students' personal epistemologies. These then provide more finely grained findings and offer deductions about these factors and suggestions for practice which are more tightly focused. These chapters reporting the findings projects are aggregated and ordered under three distinct categories: (i) principles associated with the effective enactment of the curriculum, which include experiences in practice settings (Chap. 7); (ii) pedagogic practices that might be enacted before, during and after students have engaged in practice-based experiences (Chap. 8) and (iii) engagement and development of students' personal epistemologies in ways that are effective in supporting their learning (Chap. 9).

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# Chapter 7
# Curriculum Considerations: The Integration of Experiences

## 7.1 Curriculum Considerations of Integration

The integration of students' experiences in academic and practice settings has been advanced in earlier chapters as a process of their experiencing (i.e. construal and construction of knowledge) in both of these settings. This includes their reconciliation of these experiences as directed to developing the kinds of knowledge students need for effective occupational practice upon graduation (Billett 2014). In this way, both the experiences provided and students taking up of those experiences are intentional. Hence, realising the desired outcome of securing the knowledge required for work performance needs to include accounting for how these two kinds of social settings can make their particular contributions (Eames and Coll 2010a; Ellström 2001), but also how students come to engage in the process of meaning-making through their experiences in both settings (Billett 2009). Central to this process of learning is the organisation and ordering of the provision of experiences for learners (i.e. the 'intended' curriculum), what actually is provided for the students in terms of experiences they have access to (i.e. the 'enacted' curriculum) also how students' personal epistemologies (i.e. ways of knowing, learning etc.) makes sense of what is afforded them (i.e. the experienced curriculum) (Brady and Kennedy 2003). These epistemologies have been shaped over students' life courses by their cognitive experiences (Valsiner 1998) and through their deployment have contributed to their on-going development. That development underpins students' domains of knowledge, which they have constructed and which likely directs their interests and intentions (Malle et al. 2001) when engaging in activities and interactions from which they learn. Consequently, consideration of curriculum and pedagogic practices are central to this process and, in particular, promoting and guiding intentional learning (Tynjälä et al. 2003). Yet, they cannot just be seen in terms of what experiences and outcomes are intended and what is provided for students. Instead, they need to extend to how students will come to engage in the curriculum activities and interactions.



S. Billett, *Integrating Practice-based Experiences into Higher Education*,
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The focus in this chapter is upon curriculum issues and implications. In terms of curriculum as an ordering of experiences in and through each of the two social and physical settings (i.e. education situations and workplaces), the key considerations include the intended kinds of learning that these experiences are supposed to secure, the identification of the particular kinds of experiences to be provided for students, and the sequencing and duration of experiences in both kinds of settings (i.e. their ordering). These considerations extend to how students are positioned in this sequencing of experiences. For instance, are they to be observers of what others are doing or partial or full participants in the activities and interactions that are occurring in both of these settings? All of these considerations are associated with the original meaning of the word curriculum: the course to progress along (Marsh 2004). Consequently, key curriculum considerations are the identification of pathways of experiences and engaging students in activities and interactions directed towards them securing the kinds of knowledge intended to be learnt through these processes (Billett and Choy 2014). Should, for instance, students first engage in practice settings to understand something of the occupational practice, its requirements and practices prior to participating in university courses? Or, should this occur, early in those courses but not before students have acquired some foundational knowledge so as to be able to make sense of and contribute to activities in that setting? Such an ordering has recently been discussed in a consideration of midwifery students' experiences in the university-based, continuity-of-care, and clinical experiences (Sweet and Glover 2011). This consideration addressed whether these students should only engage in practice settings once they have had sufficient experience or knowledge of the birthing process. That is, understanding the goals for midwifery work, including the concerns and perspectives of birthing women, prior to performing assessments and intimate examinations of those women. So, the kinds and sequencing of those experiences are important curriculum considerations.

An associated consideration is the duration of these experiences and whether they should be ordered to intentionally provide students with a range of occupational experiences or in just one or two settings, but for longer periods of time. Sometimes, the educational purpose (i.e. goals for learning) may be best suited by continuity of experience – to develop procedural capacities required to perform specific tasks, including their honing, for instance. Yet, for other purposes, – such as to understand something of the diversity of the occupational practice – a variety of experience may be desirable. That is, whether there is a necessity for students to engage in supervised instances of occupational practice, or whether other kinds of experiences are adequate and appropriate. Supervised arrangements require organisation, including engagement with industry partners and are often highly costly, whereas in other situations, students can organise their own work experience and may not even require close supervision, because the consequences of errors are minimal. Accordingly, the consideration here is what of kinds of arrangements are appropriate and whether these should be sequenced in some ways.

Added here are considerations of how students might come to be engaged in these activities. In the second fellowship, the students reported a strong preference for that to be a gradual process of engagement and participation (Billett 2011a).

That is, students wanted to first engage gradually and peripherally in work settings (i.e. in tasks that make minimal demands and where errors can be tolerated) and with roles that allow them to engage at a level commensurate with their competence (i.e. zone of potential development) (Valsiner 2000). In this way, they would not be subject to the full demands of practice, until they are confident and competent to do so. This consideration is well-founded on educational grounds as much as those concerned about work activities, clients, patients etc. Educationally, while non-routine or novel activities are important for rich learning and advancing learners' knowledge, if the experiences are overwhelming in their demands (i.e. beyond their zone of potential development), then negative outcomes can eventuate for students, unless they are closely guided by more experienced partner (Rogoff 1995). Hence, the experiences within students' scope of potential development are those most likely to be generative of productive learning, as these build incrementally on what they know, can do and value.

It is these kinds of issues that need to be considered and responded to in organising and enacting learning experiences both within practice and educational settings. This consideration along, with those about how these experiences can be enriched or augmented, thereby, potentially, extending the reach of their zone of potential development (Valsiner 2000). In total, all of these factors comprise a broad set of curriculum considerations that need to be considered in terms of the three conceptions of curriculum introduced earlier. That is, the 'intended curriculum' – what is intended to occur and also be achieved (i.e. knowledge to be learnt) through implementing the curriculum, the 'enacted curriculum' and the 'experienced curriculum' – what students experience and learn. It is these three conceptions of curriculum that are used here to address this array of curriculum considerations and discuss implications for educational practice.

## 7.2 Intended Curriculum

The intentional organisation of experiences for higher education students, includes how those experiences are enacted and then engaged with by students, is central to how the utilisation and integration of work-based experiences might best progress (see Chap. 2 – Purposes of Higher Education: Contemporary and Perennial Emphases) (Eames and Coll 2010b). As already noted, the intended curriculum is exactly that: what is intended to occur and also be achieved (i.e. knowledge learnt) through the experiencing of the enacted curriculum. The intentional planning for sets of experiences is aimed to achieve particular kinds of educational goals or purposes (Print 1993; Tyler 1949). Consequently, it tends to focus on identifying the kinds of educational goals to be realised, the means of achieving those goals in terms of the organisation of experiences, which includes the kind of content students need to learn, and how all this will be enacted in both educational and work settings. Of course, there can be no guarantee that what is intended will be faithfully enacted and lead to learning that is consonant with what has been planned (Marsh 2004).

Inevitably, circumstances of enactment cannot be fully understood, anticipated or known about by those who planned the curriculum. Moreover, there are a range of factors shaping the implementation of what is intended more or less faithful too what was intended and in some way unique (Print 1993). This has been long recognised in the school-based curriculum development approach which presses for decisions about the detail of educational intents and content to be made locally (Brewer 1978; Skilbeck 1984). Also, as foreshadowed, there can be no guarantee that what students experience will lead to the intended kind and scope of learning. Indeed, it is difficult to predict how the range of learners engaging with the enacted curriculum, will come to make sense of and learn from what is provided for them (Print 1993).

Nevertheless, and importantly, curriculum development is an intentional process that seeks to comprehend and accommodate the range of factors comprising the purposes for the educational provision (Brady and Kennedy 2003). This includes factors associated with its enactment and understanding of students and the consequences of all of these factors. The degree to which all of this is possible, depends upon the predictability of issues associated with enactment and student engagement. The more that is known about these factors the greater the prospect of progressing with greater certainty, which is why situational curriculum development is so important (Skilbeck 1984; Smith and Lovatt 1990). However, when the range of factors extends to those that are unknown or unknowable (i.e. as is the case with much of learning), it becomes more difficult to confidently suggest intentions that are likely to be realised. In terms of the utilisation and integration of work-based experiences, this includes some of the unknowable contingencies associated with different kinds of workplace experiences that students will have and the limited influence that educators have over those experiences. As foreshadowed above, it is not possible to predict how students will come to engage with and experience what has been provided for them. Take, for instance, earlier references made about many contemporary higher education students being ‘time jealous’. As issues associated with ‘time jealousy’ are likely to be personal dependent (i.e. dependent upon their particular circumstances), these are difficult to plan for confidently. In the Allied Health project, a practicum induction process which had been welcomed by one group of students was firmly rejected and seen as an irrelevant imposition by another. Moreover, experiences that educators might find worthwhile, might not be shared by students. For instance, in discussing educational process with medical students in an American university, they complained that the standard approach of medical teaching through the ‘grand rounds’ (the round of ward consultations led by the senior registrar or specialist) was not an effective use of their time. These students complained that the educational worth of these experiences quickly degraded, unless they were interesting and challenging cases. Moreover, their preference was for more independent study where they engaged with web-based materials to understand particular patients’ conditions and responses to those conditions. Of course, the more such factors are known about, the more the intentional planning can seek to accommodate these factors.

The key point here is that the intended curriculum is ever only that: intentions for what will be achieved. Most important and establishing these intentions are to

have clear educational purposes about what is to be achieved. Hence, it is necessary to consider educational purposes associated with utilising and integrating practice based experiences in higher education.

### 7.2.1 *Aligning Educational Purposes with Work Integrated Processes*

The selection of educational purposes is central to any intentional program or intervention that aims to secure particular kinds of learning, as set out and discussed in Chaps. 2 (i.e. Purposes of Higher Education: Contemporary and Perennial Emphases) and 3 (i.e. Educational Purposes of Integrating Experiences in Practice and University Settings). The planning for utilising integrating work-based experiences is certainly no exception. Hence, an important starting point is to identify and delineate the kinds of learning outcomes or aims and goals that are supposed to be realised through these experiences. In Chap. 3, a broad set of educational goals were identified for integrating work-based experiences within higher education programs. These are quite diverse and can potentially be associated with:

- Learning about an occupation;
- Learning about some of the various forms of that occupation;
- Extending the knowledge learnt in university settings;
- Orienting to the kinds of places where the occupation is practiced;
- Building the occupational capacities (i.e. the canonical, conceptual, procedural and dispositional) required to be an effective practitioner of that occupation;
- Developing occupationally specific forms of knowledge and procedures required for particular practice settings;
- Developing more broadly applicable learning that is not restricted to the requirements of a particular setting; and
- Meeting requirements of occupational or professional licensing.

This listing of educational purposes, whilst not exhaustive, is helpful for considering the kinds and range of educational intent that are attempting to be achieved through higher education programs. It also indicates that quite distinct approaches and educational processes are required to achieve these purposes. For instance, as discussed in Chap. 3 (Educational Purposes of Integrating Experiences in Practice and University Settings), processes that support students' learning about their preferred occupations, perhaps through opportunities to observe or engage peripherally, are quite different in kind and duration than those aiming to develop occupational-specific capacities. That is, the experiences and time required to develop and hone procedural skills required to effectively practice within one or across a range of instances of that practice. These differences in educational intents have implications that extend to the duration and sequencing of experiences and

the kinds of activities and interactions that students would be required to access, as was noted above. Moreover, these general statements of purpose (i.e. goals) can also be used to identify more detailed and specific learning outcomes required to guide both instruction and assessment (i.e. educational objectives). For instance, healthcare professionals might need to learn about a range of types of dressings and conditions under which each of these types of dressings would be applied to heal a range of wounds, injuries etc. Whereas goals and aims are likely to be most helpful in organising the structuring of the experiences for students (i.e. sequencing, duration, timing, engagement), more detailed statements of purpose in the form of objectives are likely to be helpful for specifically enriching experience for particular purposes (i.e. pedagogy) (Brady and Kennedy 2003). These goals are not only helpful for higher education institutions and teachers to organise learning experiences for their students. They are also useful for selecting how and for what purpose practice-based experiences need to be organised for and structured within the overall course provisions. They can also inform individuals in practice settings (i.e. supervisors, skilled practitioners, clinical supervisors, preceptors) about the desired requirements, expectations and outcomes to be realised through students' experiences (Orrell 2011). Perhaps not surprisingly, it is those working as teachers within higher education institutions who will likely need to take the lead in refining these educational intents, because it is they who are most aware of the range of factors that shape the provisions and intended outcomes (Skilbeck 1984).

Moreover, having clear statements of intent can also be helpful for informing students about what it is expected they will learn through these experiences, and justifying the worth of the goals for that learning (Print 1993). They can also direct students' efforts towards that learning and those learning goals. So, clear and detailed statements of intent are helpful for advising all of those who are engaged in these programs, (i.e. teachers, students, workplace supervisors and mentors), about what students are supposed to achieve through their engagement in these experiences. Certainly, given that the reach of higher education programs now extends into practice settings beyond the higher education institutions, and where student learning needs to be supported by others, it is even more important for program requirements be clearly articulated in ways that are comprehensible for the widening audience (Cooper et al. 2010). Table 7.1 attempts to align the educational purposes set out in the list above with considerations for curriculum and pedagogy intended to realise these different kinds of outcomes.

In this way, the table juxtaposes the set of educational purposes that were elaborated in Chap. 3 with the sets of curriculum concerns outlined above in this chapter. That is, a consideration of the: (i) timing and sequencing of experiences; (ii) duration of those experience; (iii) how those experience might be best organised; (iv) required kinds of student engagement; and (v) kinds of experiences to be provided. The propositions set out in each of the columns arose from findings across the two fellowships. However, they are not necessarily complete, comprehensive and are doubtless open to criticism, contestation and refinement. Nonetheless, they provide a means to align particular educational purposes with considerations about the shaping of pathways of experiences in terms of their sequencing, timing, duration,

**Table 7.1** Matrix of educational purposes and processes

| Educational purpose | Timing and sequencing | Duration | Organisation | Engagement | Kinds of experiences |
|---|---|---|---|---|---|
| *Learning about the occupation* | Early in the university program | Short, long enough to observe | Access to variations of practice | Observation and participation in peripheral tasks | Observation and opportunity to experience the occupation |
| *Learning about variations of that occupation* | After some initial experience of the occupation | Short, long enough to observe and listen | Access to variations of practice | Opportunities to engage across workplaces and also with other workers | Access to a range of work settings |
| *Extending the knowledge learnt in university settings* | During or after this knowledge has been imparted | Possibly short, but well focused engagements | Pathways of experience used to make explicit the applicability of knowledge learnt | Effortful engagement to assist the application of knowledge to novel circumstances | Engagement in authentic workplace activities of different kinds |
| *Orientations to the settings where the occupation is practiced* | Early in the university program | Long enough to observe a range of work settings | Rotation through a range of workplaces to understand how practice is enacted | Engaging students in their developing understandings about these activities | Rotation through a range of workplaces to understand how the occupation is practiced |
| *Building the occupational capacities required to be an effective practitioner* | Building upon some initial experience | Longer periods of engaging in a range of workplace activities | Progressively longer periods of practice and more demanding tasks during those periods | Engaging in a range of authentic activities, initially guided by more expert partner | Provision of access to authentic work practices and engagement in appropriate level tasks |
| *Developing occupationally specific forms of knowledge required for particular practice settings* | After a period of experience in the practicum setting | Long enough to engage with current work activities and develop specific knowledge | Engagement in diverse forms of the same occupational practice and opportunities to share and compare | Engagement in activities and opportunities to observe and model | Over some period of time to understand the requirements of practice |
| *Meeting requirements of occupational or professional licensing* | Gradual engagement and building capacity across program | Adequate enough to build capacities and understanding | Built into program to develop required capacities | Increasingly engaging in activities reflecting occupational requirements | Gradual engagement and rotation through different kinds of settings and experiences |

and organisation, and how students might come to engage in them. By bringing together these purposes and processes, it is possible to identify the means by which a range of decisions about how the intended curriculum could be organised.

## 7.3 Key Considerations for the Intended Curriculum

It follows that the key concerns for the intended curriculum are: (i) the kinds of educational goals to be achieved (i.e. being clear about what students are intended to learn), (ii) the means of achieving those goals in terms of the organisation of experiences, and (iii) the kind of knowledge that needs to be learnt. In consideration of the integration of students' experiences from both practice and university settings, and findings from the fellowships, the following principles and practices associated with the intended curriculum are proposed. From this analysis of purposes and processes, some key considerations associated with the intended curriculum to support work integrated learning comprise:

- Being clear about what needs to be learnt (i.e. the intended learning outcomes) in order to identify what experiences are likely to secure that learning;
- Aligning the kinds of experiences provided for students with the intended learning outcomes;
- Organising a gradual and staged engagement with practice-based experiences seems to suit many educational purposes;
- Aligning the duration of particular experiences with their educational purpose (e.g. orientation versus skill development);
- Acknowledging practice settings as providing experiences to understand the requirements of practice, not merely places to practice, and taking this into consideration when sequencing experiences in academic and practice settings; and
- Intentionally sequencing preparatory experiences and opportunities to consolidate and reconcile learning after practice experiences into the curriculum.

In some detail, these concerns are as follows.

### *7.3.1 Educational Processes*

Whatever the educational purposes for providing and integrating students' experiences in practice settings into the higher education program, these purposes need to be understood to inform the kinds of educational decision-making required to realise them. These purposes and the processes with which they are aligned need to be considered as part of the intentional organising of students' learning experiences. These considerations, as noted, extend to the timing, sequencing, duration of experiences planned for students and the kinds of activities and interactions that they

comprise for achieving particular educational purposes. For instance, extending the example used above, as instanced in Table 7.1, experiences organised for learning about the occupational practice or variations of it, are likely to be distinct from those associated with developing specific occupational capacities. The former might comprise visits to a number of different settings (e.g. kinds of hospital wards, print and electronic media companies) in which the students are largely observing the activities of those working there. The latter likely requires the active engagement in authentic work activities by the students and over the length of time required to develop effective procedural capacities (i.e. ability to perform specific procedures e.g. injections or sutures) or becoming haptic competent.

Noteworthy here is that workplaces can, by degree, be difficult to engage with and access. Therefore, considerations about the kinds of engagements, durations of those engagements etc. need to be carefully considered when planning the intended curriculum. For instance, in some healthcare settings it has been helpful to use hospital wards that have low levels of acuity (i.e. geriatric and orthopaedic wards) as sites for the developing students' occupationally-specific capacities, including them taking responsibility for patient care, albeit monitored by more expert practitioners, and also to practice working inter-professionally. This kind and level of workplace engagement is clearly quite distinct from visits to workplaces for students to be orientated to the kinds of setting in which they will practice their occupations. The former, however, simply may or not be available. Hence, being clear about educational purposes can inform the consideration of the kinds, forms and duration of the required experiences in practice settings, and also how the practicum setting might support the students' learning.

### *7.3.2 Gradual and Staged Engagement*

A concern for the intended provision and integration of practice-based experiences is the gradual and staged engagement in those experiences. This concern includes the timing, sequencing and duration of these experiences. Whilst not always possible, this principle of gradual engagement sets up a basis organising students' experiences in practice settings, and has been variously referred to as the learning curriculum (Lave 1990) or the workplace curriculum (Billett 2006, 2011b). This consideration can extend to deliberations about how to utilise other kinds of experiences, such as students' paid part-time work and opportunities to observe others' practice, prior to or instead of supervised placements. For instance, experiences such as observing courtroom proceedings, by law students, and other kinds of work-based experiences (e.g. observing experienced teachers) that do not necessarily extend to supervise practicum placements can be used for orientations to an occupations or identifying the goals to which students needs to aspire and learn. So, considerations about substitute experiences, such moot courts and student-led graphic arts studios, might include how they should be sequenced to prepare students for experiences they might encounter, need to understand or, even, respond to in practice settings.

### 7.3.3 Timing and Sequencing

The timing and sequencing of practice-based experiences and their integration into curriculum is a key factor that needs carefully and intentionally planned curriculum processes. In the fellowship studies, having experiences of practice settings early in the program of study was universally endorsed. There are bound to be exceptions, but regardless of whether the goal is to inform about the occupation itself, understand some of its variations, develop occupational capacities or understand situational requirements for performance, that early exposure to practice settings seems generally helpful. Of course, the kinds and duration of those experiences will depend upon the intended educational purposes. For instance, in one project 'staged engagement' was highly valued by the majority (i.e. 81 %) of students (Teacher Education 2 project). These students referred to the importance of engagement in practice that began early in their course and gradually engaged them in the work setting and activities, albeit peripherally. There is also the parallel consideration of the intensity and form of engagement. For instance, to engage students in practice environments and activities at an early stage in their studies they might participate in related activities, but in ways that are not crucial. Nursing and medical students might undertake hospital orderly tasks, education students might act as aides to teachers, communication students might prepare text that others will edit, for some instances.

Identifying the most effective sequencing of experiences inevitably requires a consideration of the perennial question about what should come first, theoretical conceptions, or procedural capacities (Teacher Education 1 project). Of course, as with the notion of staged engagement, the development of both procedural and conceptual capacities need to progress together, along with dispositional attributes associated with practice. Also, the assumption that theory (i.e. propositional knowledge) is learnt in the classroom and mainly through engagement with books is clearly erroneous because this form of knowledge occurs in practice settings. Equally, as the development of procedural capacities does and should arise through activities and interactions in practice and academic settings, experiences in both kinds of settings needs to be included in the 'intended' curriculum. It is probably unhelpful to view the kinds of learning required for professional practice as 'theory' and 'practice' capacities when we have more effective and accurate concepts in the form of procedural and conceptual forms of knowledge. This issue arose across the projects, in particular from concerns raised by students or those who led the projects. Central to students' concerns were usually about their level of competence to engage in tasks in practice settings (Molloy and Keating 2011). This was often reported in terms of them not wanting to appear incompetent and inexperienced, or even worse, look foolish. All of these are considerations for educational processes (Law project). Sensibly, many students report that if their engagements in practice setting require them to perform occupational tasks, as many of them want and are required to, then prior to them they would need the procedural capacities to be effective in those settings. Higher education teachers were also concerned about students'

readiness, leading to considerations of preparatory experiences that are discussed in Chap. 8 (i.e. Pedagogic Practices Supporting the Integration of Experiences). Also, added here are considerations about the timing of events that intentionally promote learning such as reflective sessions (e.g. between two sessions in the Law project), or during student nurses' clinical placements (Newton 2011), the debrief sessions that social work students engaged in (Cartmel 2011), not to forget the sharing sessions that chiropractic students used to explore the distinct set of values that shapes to different approaches to the occupation (Chiropractic project). Much of the concern in these projects is about developing the occupational knowledge to assist them secure their identity with and capacity to engage in the occupation.

### *7.3.4 Duration*

As with sequencing, the desired duration of experiences needs to be identified through a consideration of purposes (i.e. what is seeking to be achieved through these experiences), and the likely means of secure those outcomes. As discussed, depending whether the educational goal is an orientation to the occupation, understanding of parts or variations of its enactment, or developing specific strategic capacities, then the duration will differ from short visits to longer term placements in long-term engagements. For instance, whilst nurse education programs often feature periods of placements in hospital wards that can comprise rotations across wards specialising in different kinds of conditions and treatments. A common practice is for nurses towards the end of completion of their nursing degree to engage in a 'graduate year' comprising just two or three rotations. Whereas in the former, the novice nurses likely develop conceptual, procedural and dispositional capacities associated with a specialism (e.g. for casualty, respiratory, orthopaedic, oncology patients), the latter seeks to develop further those understandings and to greater depth, including the development of higher order strategic knowledge about nursing and depth of conceptual knowledge that are about links and associations.

So, there is a need to plan and organise students' experiences on these kinds of bases. For instance, graduate teacher education students in projects based in practice, emphasised the worth of gradual and staged engagement. They proposed a half a day a week for 5 weeks and other activities over 8 weeks before a 5-week practicum as an effective basis for integrating experiences across both settings (Teacher Education 2 project). So, the optimum duration of experiences and number or rotation of students through different experiences needs to be aligned with the achievement of educational purposes. For instance, it was suggested in one study that too many rotations across work settings appear to work against the adaptation of knowledge from one setting to the next, and also take time for students to become oriented to their new setting (Medical Education and Teacher Education 2 project). Consequently, short term placements make it difficult to secure transitions in identity for the indigenous teacher aides who were being prepared for new roles as teachers (Teacher Education 1 project), which are particularly important

if there is an expectation that students will come to work effectively as novice practitioners in a particular setting. Such an approach denies difficulties that students may well have in taking what they have experienced and learn from one setting and applying it in another setting, even when the occupational practice is supposed to be the same. Then, as noted, there are requirements in some occupations for students needing to accrue hours or particular kind of experiences for occupational recognition or registration. In the fellowship projects, this included engineering students having to engage in over 600 h of work-based experience so they can apply for professional registration, and for which midwifery students having to engage in a set number of continuous care experiences with birthing women. In both instances, while there were clearly educational benefits from engaging in these experiences, overwhelmingly the requirement for the extent of duration or the number of experiences was ultimately associated with occupational recognition.

Hence, decisions about the duration of work experiences need to be informed by and aligned with a clear set of educational goals.

### *7.3.5 Engagement*

Processes preparing students for engagement in practice settings need to be set out as clear educational intents. The value of authentic experiences can potentially be degraded unless students engage with those experiences, and are aligned with what they need to learn through them (Public Relations project). This engagement may require students being adequately prepared to promote and participate effectively in their learning related activities. That is, have the kind of occupational capacities allowing them to participate in the ways that are intended for them in those work settings. This may necessitate the students having to develop a range of procedural skills so they can perform a set of specified tasks in the workplace and participate as a worker in the conduct of those tasks. For instance, in the nurse education project, student nurses practised specific procedures such as taking temperatures, placing dressings on and inserting stents as well as sutures in a clinical skills laboratory prior to attempting to enact these procedures in a hospital ward. Here, it is worth reminding about the strong preference reported by students for gradual engagement in workplace settings. This is so they can come to work and learn in effective ways, based on their level of competence and confidence. However, this is a well-established curriculum premise (Brady and Kennedy 2003).

Another dimension of engagement is that workplaces may be difficult to offer certainty in how students will be engaged with and supported in their placements, and the degree to which they will be able to engage in the tasks associated with their experience and capacities. Taking each of these in turn, hectic and busy workplaces may not be wholly welcoming of students and unsympathetic to their sensitivities, level of skills and need for engagement and guidance. In such environments, rather than being assisted, students may have to identify how best to engage, and what to and not do. There may well be unfounded, uninformed or just plain wrong

assumptions by those in the workplace about what students know and are able to do. For instance, in the public relations project, students were intended to work in teams and were allocated to support promoting the public relations of not-for-profit organisations. Yet, as discussed later, many of these organisations were unused to having students and, therefore, how to engage with them effectively. Moreover, these largely volunteer-based organisations, lacked expertise or specific activities associated with public relations. So, they were unable to provide advice to the students on how they should proceed with public relations in the welfare sector. Whereas in some workplaces there are well-established processes for engaging with students (i.e. healthcare, teaching, law), a clear structure and organisation of work tasks and means for engaging students, this is not always the case. In addition, as with the public relation students, there may be absence of expertise to learn from in the work setting (Public Relations project). In this project, this situation led to dissatisfaction in the process, and disharmonies within the teams of students. That is, the intended group-based learning activities began to suffer from tensions and dissatisfaction with process.

Another dimension of engagement is that a number of students referred to the practicum experiences being invisible within their university programs. That is, despite the time and effort taken to engage in these activities, they were not referred to, integrated or assessed as part of the study activities. Given the extent of sacrifices that some students made to secure and fulfil their practice-based experiences (Sweet and Glover 2011), they were disappointed that there was little effort to integrate those experiences into their programs, and that there was not always much interest expressed by their teachers in those experiences (Engineering project). All of this is counter to productive engagement and indicates to student that these experiences are not important and should be only engaged with superficially.

### *7.3.6 Kind of Experiences Leading to Particular Outcomes*

As noted above, different kinds of practice-based experiences will likely lead to particular kinds of learning (Tourism project). For instance, in a project about tourism, the students were given three options for their practicum component. These comprised either: (i) taking a work placement, (ii) engaging in a tourism project or (iii) undertaking a university-based research activity. The activities and interactions that comprise these three different kinds of experiences clearly can lead to very different learning outcomes, as was captured in the student feedback. These differences are hardly surprising. Particular kinds of learning accrued to students who are engaged in work placements, for instance. One student worked in an information booth in the main street of a metropolitan city providing advice to tourists about transport, attractions, accommodation, food etc. She reported coming to know much about what kinds of queries tourists had and came to understand their needs, including the particular kinds of queries and needs of different kinds of tourists. Another student engaged in a project-based activity with a tourism

attraction and came to know much about that attraction, its purposes, practices and the kinds of tourists who visited it. Another student engaged in a research-based activity doing a desktop analysis of tourism, tourists et cetera. Of course, all of these projects rendered particular and outcomes to students. Yet, they were quite different outcomes. The student who participated in the tourist information centre presumably learned a lot about tourists, but also how to communicate with, identify needs and provide advice. The student engaged in the tourism project got to know a lot about one attraction, their strengths and weaknesses, and also how to write a report in language accessible to those in that attraction. But the student also got to meet people from the industry and also formed networks of contacts through her work. The student engaged in the research project learned a lot about research-related activities and how to prepare reports. Whilst all of these kinds of learning are important, students undertaking the same course had experiences which led them to very different kinds of learning outcomes. All of this difference is fine if that was the intention. Nevertheless, this particular project emphasises the importance of understanding what kinds of learning are likely to arise from what kind of experiences – or as Rogoff and Lave (1984) note – activity structures cognition. Therefore, more than being vehicles through which to learn, the kinds of activities and interactions in which students engage has consequences for their learning (Tourism project).

In a related study, of students in an information technology course, a similar issue arose. That is, the host university had great difficulty in providing work placements for overseas students. Whereas the domestic students were able to secure placements in high-end information technology companies, the international students were unsuccessful in securing such placements. Consequently, the university secured them placements in not-for-profit organisations where they worked to assist these organisations in matters associated with their information technology needs. However, whereas the overseas students were engaged in relatively menial tasks, such as fixing up problems with dated computers in charity shops, their domestic counterparts were exposed to emerging and current technology and leading-edge applications. These two instances reminds of the importance of being aware of the likely outcomes for students from their engagement in particular kinds of experiences. Importantly, more than merely providing placements for students, there need to be careful consideration of what kinds of knowledge these experiences are likely to secure so that there can be an alignment between the kind, duration and bases of engagement of the practicums. For instance, if the educational goal is to develop a range of specific occupational procedures and understandings, an experience of longer duration and perhaps in the same setting is most appropriate. If, however, the goal is for students to learn about something of the diversity of occupational practices, then it would be helpful to have experiences in a range of settings where the occupation is practiced (Journalism project). If, for instance, the intention is to assist students develop or transform their identity and self through placement activities (Education 1 project), then quite different kinds of experiences and ways of utilising those experiences will likely be required.

Consequently, rather than just providing experiences in practice settings, it is important to understand the intended purpose of that experience and attempt to align it with the kinds of intended educational purposes for the students program. Certainly, there is much to be gained by simply having experiences in work settings per se. Also, given the significant investment in terms of workplaces' and students' time and resources; aligning experiences with intended outcomes is important to assist make them as effective as possible. That is, to attempt to align particular kinds of experiences with the kind of goals student need to achieve. Of course, within all of this is the real prospect that the kind of experiences provides in workplaces are not able to be managed from the outside, or in the events of daily working life that what is intended will necessarily occur.

As is discussed in the next chapter, a key teacherly role here is to maximise these experiences through their effective enactment and optimise students' experiences.

So far, the account here has focused on the intended curriculum, the plans made and the purposes identified for educational experiences (Marsh 2004). It is these that are set out in documents such as syllabuses and course outlines. However, these are only statements of intent and it is the implementation of these intentions which is referred to as the enacted curriculum. This is the form of curriculum which is discussed next.

## 7.4 Enacted Curriculum

The enacted curriculum is that which is implemented by teachers and workplace supervisors through the experiences they provide for the students. Often, the enacted curriculum is shaped by what is available in terms of teachers' expertise, the opportunities and resources available and readiness of the students. For instance, across the fellowship projects there were a large range of factors shaping the kind of workplace experiences that were provided. It seems fair to suggest that the range of opportunities and extent of experiences differed across the universities, with geographical location being a factor. For instance, particular opportunities were available in metropolitan centres, whilst others were available in regional locations. If there were only a few workplaces in the university's location this could limit the range of available experiences. For a creative arts project, located in a regional university, there were only a few workplaces that focused on the creative arts. There were other workplaces where the creative arts were a part of the organisation's activity (e.g. local government), but the range of workplaces available for practicum experiences were quite distinct from that available in a metropolitan centre. Yet, many of the creative arts workers in this region were sole traders: self-employed artists or practitioners. Hence, the strategy adopted by this teacher was for students to develop a portfolio of their particular field of creative arts to understand who was involved in it and the kinds of opportunities available in that region. As noted in the section above, however, the different kind of experiences that students have in the enactment of the tourism project and the engineering project that aimed to assist

communications amongst socially-isolated students (Engineering 2 project), led to quite diverse experiences and learning outcomes within the same cohort of students. Also, it was found that beyond what is available and can be accessed through the higher educational institution, were the interests and capacities of those who teach. Depending upon their interests, experience and capacities, as well as contacts, a very diverse range of experiences can emanate for students.

In preview, some of the key findings identified with enacting the educational provision in the projects which included students accessing and integrating practice-based experiences within the curriculum are as follows:

- Teachers' interest in learning in practice settings and their capability to enact the effective integration are likely to profoundly affect the experiences that are enacted.
- These capabilities may extend to coaching and assisting students reconcile their experiences, or they might not.
- Teachers' knowledge of and engagement with practice settings beyond the university also likely influences how they enact experiences, including communications with those settings.
- The availability of resources and access to practice-based settings will mediate the range of possible experiences for students.
- There may be a need to augment or maximise the available opportunities (e.g. in regional settings)
- The level of supervision should not be premised only on the potential for harm, but also on securing students' learning.
- Need to consider options other than supervised placements to secure intended educational purposes, including students' paid part-time work, their professional employment, opportunities for observation, shadowing etc.
- Students' readiness (e.g. interest, capacities, confidence) needs to be accounted for when enacting particular kinds of experiences.
- Likely need to organise orientations before students engage in practice settings, utilise opportunities for support during practice-based experiences and provide interludes for sharing and reflections after them.
- Additional or specific experiences may be required for particular student cohorts (e.g. overseas students)
- The gradual and staged enactment of experiences in practice settings seems well aligned to building confidence, capacities and interest.

In the following sections, an elaboration of some of these key findings associated with teachers, resources and students are advanced.

### *7.4.1 Teachers*

The interest of and expertise, even contacts, possessed by teachers are likely to have a significant effect upon how practice-based experiences are enacted and the integrated within higher education courses. One project (Business 2 project)

led to a questioning of assumptions about the helpfulness, understanding about providing and utilising work-based experiences by educators. Other cases suggest that even when interested, the capacities of the teaching staff to effectively enact and fully utilise students' experiences in practice settings may be quite constrained in different ways. The concerns here are the readiness of teaching staff to understand the potential of learning in practice based settings, the degree they are sympathetic to it and engage actively to enrich and integrate those experiences. Higher education teachers may be in disciplines where there is no tradition or expectation of providing or utilising practice-based experiences for their students. Hence, even if they are welcoming of organising and providing students with these experiences and do not require being persuaded of its worth, they may lack the capacities to enact effect integrating experiences (Business 1 project). For instance, in one project, it is claimed university teachers are now becoming life-coaches for students (Communications project). That is, through engaging in processes of debriefing students after practice experiences, teachers were accommodating a whole set of student issues associated with career choices and preferences towards particular forms of practice. This includes counselling about how they need to perform in the workplace in their occupational roles. However, the project leader commented that this was highly rewarding work and opened up an aspect of his role as a teacher in higher education that he had not previously experienced in that sector. He commented that, as an ex-high school teacher, it reminded him of the role he had as a duty of care to school-age students long ago when he taught in high schools.

However, the expansion of the roles of teacher in higher education also extended to their ability to engage with workplaces and support students when particular kinds of expertise were lacking in those workplaces, as was the case with the public relations students (Public Relations). In addition, part of the teacherly role comes to include being able to actively assist students reconcile experiences they had in their practicums. That is, the ability to exercise the kind of pedagogic practices (e.g. classroom-based activities) that can be helpful in optimising students' experiences and attempting to ensure that that productive outcomes are achieved through processes of sharing, discussing and critically appraisal. It is these kinds of pedagogic practices that are referred to in the next chapter. Certainly, it seems that authentic experiences in practice settings can: generate changes in students' values in ways that need to be guided where there are particular sensitivities (Chiropractic project– e.g. cultural competence), engage students with the requirements of existing practice (Music project), and also in ways which can be quite transformative (Law project) (Campbell and Zegward 2015). Yet, the realisation of these goals will be, in part, premised how teachers are able to provide and enact experiences that can effectively secure these kinds of educational outcomes.

Then, there is sometimes a requirement for teachers to develop appropriate objectives, topics, and focus question that are important in guiding the students' reflection and integration of workplace experiences. For instance, in a business course, the teaching was based on students' work experience, and required teachers to adopt very different roles than being a lecturer (Business 1 project). This required developing processes in which the students discussed, shared and evaluated their

work experiences collaboratively to develop understandings about the operation of businesses. This kind of pedagogic approach and use of pedagogic devices built into the courses (e.g. industry research portfolio) require teachers to be competent in the use of such strategies and through them enrich students' experiences and also integrate them effectively within the curriculum. The point here is that the enactment of the curriculum includes the kinds of capacities, interests and pedagogies practices of higher education teachers.

### *7.4.2 Resources and Options*

The availability and utilisation of resources will also shape what can be enacted to provide experiences and assist students reconcile their learning experiences and those of their peers. As noted, different kinds of experiences (i.e. work activities and interactions) will lead to quite different kinds of learning, as per the examples of the tourism project and the information technology course. Consequently, it is not just about providing students with experiences in workplaces per se. It also includes providing the kinds of experiences that are likely to lead to the development of the knowledge that students are intended to learn for their course. Yet, these experiences may or may not be available in the particular location or in ways that are possible to access by students, particularly in the large numbers that now constitute many provisions of mass higher education. For instance, as foreshadowed, higher education institutions located in regional centres may have access to a different and, potentially, more limited set of work experience options than their counterparts in metropolitan settings. Of course, this works out in different ways for institutions in both locations. So, it may be necessary for experiences to be located some distance from these educational institutions or in particular places. In some instances, such arrangements are possible, whereas in others there are far less opportunities. For instance, a number of universities have facilities in rural settings to provide experiences for their medical students, which provides accommodation, supervision and work experiences in those locations. Yet, to students in other kinds of programs, even within the same universities, some arrangements are not available. For instance, in one institution involved in the fellowships, a senior academic manager asked how he could organise work experience for 1500 students each semester. Here, the simple scope and numbers of participating students compromise the kind of arrangements which are available and necessary in other faculties.

Certainly, there are some programs requiring high levels of student monitoring and supervision in practice settings (such as in education and health). The availability of and access to this kind of experience are limited or constrained to the provision of supervised practice experiences which often have to be funded by the higher education institutions. As a consequence, in some programs the duration of the practicum experiences can be quite and unhelpfully short. For instance, in

one nurse education program, the cost of supervision reduced the student nurses access to clinical experiences to periods of 2 weeks. Barely had the student nurses become acquainted and orientated to their hospital experience than it came to an end. Everybody – nurse unit managers, nurses, teachers, students –agreed these periods of experience were too short (Newton et al. 2009, 2011). However, the financial resources available could only extend to providing students with these short periods of practicum. While this kind of access might be useful for orientations to the work, or work site, it is less helpful when students need extended practice to develop procedural capacities. Consequently, it is important to consider the range of resources and options for securing particular kinds of practice experience.

Beyond, institutionally-organised practice arrangements, a range of other options exist for securing practice based experience is. One of these is utilising students' existing paid work, albeit part or full-time. Where appropriate, these existing work experiences can offer useful contributions where there is some kind of alignment between that work and what students are studying. This is one way to consider addressing the question raised by the pro-vice chancellor who queried how he would be able to provide experiences for his business students.

An option beyond those provided through resource-intensive supervised and teacher-led placements organised by the educational institution, can be found in students organising their own practice experience. Certainly, in one project, the chiropractic students organised their own placements by working with a stateless community in a province of northern India. The students raised money for their placements, not for their own living costs, which they covered themselves, and assisted this community through the provision of chiropractic work and also supporting the community materially.

In sum, there are a range of factors associated with the available resources and options that will shape what is possible to be enacted. These are based upon factors such as location, availability of experiences, the number of students in programs, the interests and capacities of their teachers and the degree by which students are able to actively engage in promoting their practice-based experiences. Whilst much attention is given to institutional teaching and opportunities in local workplaces, students themselves play a key role in what can be enacted.

So, there is a need to look beyond supervised placements and include:

- Students' current paid employment associated with their studies;
- Students' paid part-time employment;
- Observation of occupations being enacted (e.g. observing law court proceedings, shadowing);
- Students' prior experiences; and
- Simulations or substitute activities.

In response to concerns about the growing demand to secure work experiences for higher education students, options other than supervised placements can and should be enacted.

## 7.5 Growing Demand for Placements

Along with increased interest in work experiences has come a growth in the demands and requirements for student placements. A concern arising from the growing demands for work-integrated learning arrangements in higher education is how the requirement for provisions of work placements and other kinds of work-related experiences can be met: i.e. located, organised, sustained and administered. This is shaping up as a significant issue for universities and needs addressing through a consideration of both educational purposes and financial as well as administrative constraints. Because of the well-known practice of providing supervised practicum placements within nursing and education faculties, there is a risk that these kinds of arrangements will be taken as the norm for all provisions of work-integrated learning experiences. Yet, such arrangements are likely to be unsustainable in the short, let alone, long-term. Moreover, while there are educational purposes that requiring such arrangements (i.e. care of patients and students), they are not necessarily appropriate or even required for all work-related experiences within higher education, such as the business students example referred to above. The starting point is to delineate the educational purposes to be achieved, and then consider the kinds of student experiences that can be deployed to secure that purpose. Once these have been identified, then consideration about the most viable means of securing those experiences and, importantly, integrating them into the curriculum can proceed. However, this does not necessarily mean the use of supervised placements.

Certainly, if the educational purposes are to engage students in authentic instances of practice to build occupational specific understandings, hone and refine procedures and values required for specific occupations, then placements in and engagement in actual work activities are likely to be necessary. Indeed, these capacities are best developed through engaging in practice which demands that these attributes are exercised and developed together. In most situations, by degree, these kinds of authentic work activities will require supervision. The need for careful and close supervision increases where this engagement is potentially harmful to others. Hence, in educational and healthcare settings there is often close supervision of students' practicum activities, which includes monitoring their performance as they engage in their occupational practice. However, many others instances of authentic practice might require lesser levels of organisation and careful monitoring of student performance. For instance, medical or nursing students might be able to access healthcare experience in an aged-care facility, where the intensity of the work and patient acuity is less than on a busy ward. Hence, the need for close monitoring is lessened. Also, journalism students might prepare a story and submit that to a media outlet for publication or broadcast. They can apply understandings about how to write stories using the skills learnt within the university in doing this activity, while that work will be subject to and monitored through editorial review.

However, if the educational goal is to assist students develop further their understanding of what they are learning in their university course applies to instances of practice to draw on a range of options other than university-organised placements

with or without payments being made to supervisors. These options include drawing on students' paid part-time work, opportunities to observe and reflect on instances of practice without actually being involved in the activities, providing partial relief for practitioners, voluntary activities and student or university organised experiences that engage students in instances of authentic activities. These kinds of options briefly discussed below.

## 7.6 Options to Supervised Placements

### *7.6.1 Students' Paid Part-Time Work*

Across many countries, higher education students are engaged in paid part-time employment. These forms of employment represent instances of work that host a range of educational opportunities for these students. Although the majority of these forms of employment are not likely to be those that students will seek to practice in upon graduation, these paid work activities can be used for a range of educational purposes. Indeed, the use of students' paid part-time work was a strategy adopted in a number of the projects in the fellowship including those associated with business (where 85 % of the students were engaged in paid part-time work) (Business 1 project), engineering where 75 % of the students were engaged in related work, and also the practice-based business course in which all of the students were employed (Engineering 2 project). In these projects, students were asked to consider and utilise their experiences of paid part-time work in the context of their higher education course. These kinds of experiences can be used to secure a range of educational goals, including some that are occupationally-specific goals and also focussing on broader educational goals. So, for example, business students engaged in paid part-time work might be asked to critique the processes of workplace supervision, workplace communication, the organisation of work, processes of advertising, recruitment, orientation to the workplace and the work, human resource development, rewards for effective performance etc. That is, using their experiences to develop understandings and procedural capacities associated with their specific occupational practice.

Then, there is a possibility of optimising the use of the diverse range of paid part-time work experiences or those from the practicum experience, that exist in many, and perhaps most groups of students, through processes such as the sharing of experiences. This paid part-time work can be used to develop understandings about how the occupation is practised in different settings and reasons for those differences. These kinds of processes and experiences can lead to the development of robust (i.e. transferable) knowledge which is a key goal for higher education. In particular, given students will not know where they are likely to be employed upon graduation, having understandings about the ways in which the occupation is practised across a range of circumstances can be helpful for assisting their

smooth transition to the workplace. That is, if they have only had a limited set of experiences, their expectations and understandings about the practice of the occupation may be restricted to those experiences. However, being able to engage with other students and access their experiences potentially opens up their insights and expectations about that occupation (Journalism, Law and Chiropractic projects). Of course, the prospects for these kinds of experiences to occur will be reliant to some degree on the resources available, including the interests and capacities of those who teach in those programs.

If the educational purpose is to understand and critically appraise work activities or practices, then the students' part-time work can, for instance, be used as field sites for students to consider, reflect upon and compare those activities or practices. So, the business students referred to above can use their paid part-time work experiences as sites to reflect upon the processes, practices and outcomes associated with management, supervision, marketing, human resource management activities. Students might be asked to note, capture and critically appraise these practices and, importantly, then present to and share these outcomes with other students. Such a process of engaged reflection, sharing and comparing practices and outcomes over a range of instances, cases, and approaches, is the kind of learning experience that can lead to adaptable learning. Through learning about a range of instances of practice, their particular worth and apparent limitations, students can develop an understanding about variations in these activities, hence the capacity to apply and adapt. Such a repertoire of understandings is likely to lead to more adaptable learning than when students only have one set of experiences. Moreover, through the process of sharing these experiences not only will students be able to expand upon their own experiences, but those students who are not engaged in paid part-time work can learn about the range of practices from their peers (Journalism, Chiropractic, Nursing projects).

There are also other ways in which students can utilise their paid part-time work such as understanding the different kinds of processes and requirements of workplaces, and also the usefulness of strategies likely required for many or most forms of paid work, sometimes referred to as generic competence. These include working with others, communication with and consideration of others' needs, and understanding both short-term and long-term workplace goals. These are the kinds of learning outcomes that many Australian universities are seeking to secure as their graduates' key attributes. More specifically, for some higher education programs, such as those in management, human services etc., this approach can be used to understand the diverse circumstances in which these disciplines are required to be applied. In all these situations, the educational worth is likely to be enhanced when the activities students are expected to undertake, in using their work, workplaces or work as field sites, are well planned, structured and organised purposefully, including opportunities for sharing of experiences and appraisals with other students in forums within the university. For instance, one of the longest standing pedagogical devices employed for these purposes is the co-op seminar that

was introduced into the co-operative education model in the USA early last century (Grubb and Badway 1998). These seminars are still used to share experiences and learning, facilitate comparisons and otherwise consolidate and extend the learning from these settings more widely in contemporary cooperative education provisions. The added advantage here is that students can use their existing part-time employment to secure experiences that are then reflected upon, rather than having to undertake practicum work that is most likely unpaid and to come at a cost to students' ability to work part-time.

### *7.6.2 Opportunities to Observe and Reflect*

Some authentic practice can be accessed without actually engaging in supervised placements. For instance, justice administration students, journalists and law students can attend court proceedings to observe and learn about court room procedures, albeit for quite different purposes. Law students, journalism students and paramedics and others involved in the justice system will be required to give evidence in court, and some prior understanding of court procedures will likely be important for these purposes. Observation and considered reflection upon these experiences may allow these students to prepare for their own role in court appearances by understanding both the goals and processes of the court and also those of witnesses. Student journalists can learn about the requirements of reporting court room events, without actually the need to have a placement. They can organise this for themselves. For law students, observing these court room proceedings can likely have a range of learning outcomes. Firstly, they can understand the processes and requirements of courtroom procedures and protocols, and how these might differ across magistrates, and other kinds of court room proceedings. Secondly, law students might use particular cases for considered discussion about the merits, the use of law and the alternate strategies or approaches they might have considered should they be conducting the case. Thirdly, such experiences, when reflected upon and discussed with peers and lecturers, can be used to identify the basis by which law proceeds and the particular orientations and approaches that they as novice lawyers may wish to adopt. Other examples include medical students observing autopsies to understand the processes involved, without having to secure placements in either hospital or forensic mortuaries. With this example, as with others, there is a need to brief students prior to these experiences about the purposes of the activities and enact provisions through which to maximise learning from these kinds of observational experiences. In all, these examples indicate that utilising opportunities to observe authentic instances of practice and reflect upon them can assist students develop understandings and procedural capacities, largely through observational processes.

### 7.6.3 Voluntary Activities

Students might also volunteer for activities with either voluntary agencies or in ways that provide them with authentic work experiences. These experiences can be either through working as a novice on the periphery of occupational practice to understand more about that practice (e.g. student teachers working as teaching aides), or if competent enough to engage in extensive occupational activities that can be used to further develop understandings and refine and hone occupational procedures. Recently, a physiotherapy student reported how she and another student had provided voluntary support to a clinic in a remote community. This allowed the students to engage in physiotherapy practice and afforded some respite to the clinic's existing physiotherapists, who were able to monitor the students' work whilst catching up on much needed administrative and record keeping tasks. These final-year students were able to engage in extensive periods of professional practice and take responsibility for patient care in a way that developed further their capacities, including confidence in treating patients, whilst being supervised at some distance by qualified practitioners. These voluntary activities provided the opportunity to develop further the capacities of students who were getting close to graduation, and in a setting and form of professional practice that was quite different from those they would likely encounter on campus. Similarly, law students can develop advocacy skills and awareness of lawyers' work through volunteering in legal aid centres, and physical education and human movement students can assist local sports teams etc. In these ways, these kinds of experience can serve to provide either formative learning outcomes or be used to provide the practice opportunities to develop further and hone students' capacities.

### 7.6.4 Student or Teacher Organised Practice-Based Activities

Many of the activities above are not required to be organised by university placements offices, as students themselves or their lecturers might be responsible for securing access to these activities. In some circumstances, it will be important for students to organise these experiences for themselves. For instance, vocational teacher educator program students have to locate their own teaching practicum and negotiate with the institution and supervising teacher about their needs for those practicums. This is important for the students because they need to make contacts with the staff within vocational education colleges to understand the specific teaching requirements and where they might seek employment in the future. Students in other programs, for instance those in the performing or creative arts, might well also find it necessary to learn how to organise their own performances or presentations (Creative Arts and Music projects). Then, there are instances of lecturing staff organising practicum or group type activities which engage students in authentic activities, in terms of the settings in which they will seek to apply their

knowledge. So, for instance, organising and operating a small business has become an activity undertaken in many management schools. In this way, in many instances, the requirement for placement services is educationally inappropriate.

## 7.7 Going Beyond Supervised Work Placements

It is probably untenable and unrealistic to attempt to provide supervised work placements for many and perhaps the majority of students in university courses. What has been proposed here is that given the level of student engagement in work integrated learning activities that is currently being planned by universities, it is important to have an array of options available for providing work experiences. The kinds of experiences need to be aligned with programs' educational purposes and be viable for universities and students and workplaces. Hence, the need is to go beyond viewing these kinds of placements as the only viable option to secure the integration of experiences from within the academy and from the particular practice setting. Instead, there are a range of possibilities that likely go beyond those proposed above. A key quality of those above is that they all provide access to authentic occupational experiences and by degree different kinds of engagement within those activities. Yet also, across all of these options is the need is to do more than organise, provide or have students secure their own work experiences.

Regardless of the kind of experiences provided or organised for students, it is essential for post practicum discussions of those experiences to be structured into the university curriculum. So, there is a need to structure opportunities for students to consider, share, discuss and those evaluate experiences. More helpfully, briefing and orientations prior to engaging with these experiences, how students might maximise the benefits of these experiences whilst participating in them and then the sharing and comparing after those experiences is likely to be an important consideration. There are a range of pedagogic devices to achieve those kinds of outcomes. These include the use of the coop seminar as discussed above, and strategies such as clinical supervisions, reflective learning groups (Newton 2011), and learning circles (Cartmel 2011) that provide opportunities for students to share, compare and critically appraise their experiences. There also is likely be a need for processes which make explicit what has been taught in university-based courses and how this relates to those practical experiences.

The concern here is to find viable provisions of work experiences and integration of experiences outside of the university setting that are educationally worthwhile and sustainable within the kind of the current resourcing of higher education. These suggestions might serve to stand as a beginning of a broader conversation about identifying, organising and utilising fully experiences of work and working life outside of the university setting.

In sum, key premises for advancing the provision of work experiences are to:

- Identify the educational purpose of the experience;
- Consider the range of ways that this experience can be provided;

- Consider which options offer optimum capacity to provide these experiences for students; and
- Organise such arrangements either through placements, the students themselves or through a teacher-led process

Mature relationships are those that acknowledge and accommodate collaboration, and recognise different imperatives and contributions. Importantly, practice-based experiences should not be seen as being opportune, or as a side issue, but brought centre stage within educational provisions. The key challenges for us as higher educators is to overcome existing orthodoxies that resist the idea of learning through practice as legitimate and productive, but rather support and acknowledge it and understand that effective curriculum and pedagogy are constructed differently in practice and educational settings, albeit shaped by consonant concepts.

### *7.7.1 Students*

Students' understandings, capacities and agency will impact upon what is enacted. For instance, students' diverse backgrounds and competence means that the planned enactment needs to account for these differences. Instead of starting with what the course intends, it may be more helpful to commence with drawing on the students' experiences and, where available, their learnings from practice settings and then engage the content to be taught from those experiences (i.e. putting the 'experienced' curriculum centre stage). Yet, there can be other ways in which students experience shape what is enacted. For instance, as referred to earlier, a special set of experiences was organised for international students to assist them understand more about the social welfare system and agencies, Australian colloquialisms and to provide a forum for these students to comprehend their practice based experiences within the social work sector (Social Work project). In this project, it was noted that the students largely came from countries which do not have a social welfare system or agencies and social workers. Consequently, the kinds of understandings that might be expected of students from countries where these existed were absent. The degree of agency exercised by students is also likely to be essential for the enactment of learning experiences per se, but perhaps never more than when they are engaged in learning experiences in practice settings away from the guidance of their teachers (e.g. Creative Arts project). For instance, where the students are capable and willing to initiate related work activities for experiential learning purposes (Music project) the enactment of the curriculum can occur in quite different ways and when students are hesitant and reluctant. Yet, the effective exercise of this agency may not be present within students (Public Relations project) and, therefore, efforts to develop it might need to be considered as part of the enactment of the curriculum. Certainly, the value of authentic experiences is unlikely to be realised unless students' engage with those experiences, and are reflexive in what they learn through them (Public Relations project). As noted in Chap. 6 (i.e. Key Findings About Integrating Experiences), here the term readiness is used to explain student engagement. That is, the degree by which students are

ready to engage in activities and learning, including being ready to be proactive and or work collaboratively with other students. If students are not ready to engage in these activities, which can extend to their competence and confidence to undertake those activities then what is enacted can be quite constrained.

Moreover, as noted earlier, across the projects, it was found that students tend to focus on issues related to their immediate concerns. These could pertain to study commitments or concerns about being effective in practice settings, the expectations of which might be quite unknown to students. So, for instance, students are most likely to be interested in experiences that prepare them to cope or be successful in work-related activities upon which they will be assessed or are otherwise important to them demonstrating competence (Health Sciences, Teacher Education, Physiotherapy projects). Hence, the organisation of experiences and their enactment need to be aligned with or, at least, not be in contradiction of students' interests and priorities. Another element of the enactment of opportunities for students is the fit between the students and the experience. In some, but not all, disciplines it is important to match students with the kinds of placements in which they engage (Journalism project). In addition, part of the enacted curriculum is considerations of preparing students for these experiences (these are dealt with in greater detail in Chap. 8 – Pedagogic Practices Supporting the Integration of Experiences). Yet, it will likely be necessary to enact provisions that can build confidence in students that they have the capacity to be effective, productive and competent in their workplace experiences (Communications project). Moreover, students may not always be clear about what is expected of them and what they are permitted to do (i.e. Public Relations project) in practice settings and this influences what they are likely to engage. For instance, previous workplace experiences are proposed as informing students about the requirements for that work in practicum (Engineering project), yet students without such experiences may need some form of orientation as part of the enacted curriculum.

In this way, there are a range of factors that shape how the educational program is enacted. Many of these factors are beyond the scope of those who might have organised the program, selected the experiences, the purposes and to specify the kind of outcomes that are to be achieved. Instead, factors associated with location, resources, those who teach in those programs and those who participated (i.e. students) all shape what is enacted.

However, and ultimately, it is what students come to experience and through which they learn that constitutes the worth of educational provisions. That is, curriculum as something experienced, and through that experiencing, what they learn.

## 7.8 Curriculum as Experienced by Students

Ultimately, learning within higher education is something undertaken by students. This learning arises from how they construe and construct what they experience and elect to engage with what is afforded them in terms of the enacted curriculum. That

is, because the process of learning is mediated by individuals in these ways, the qualities and extent of that learning will be shaped by how they engage with what is enacted. Consequently, students' engagement with and their integration of what they have experienced in both university provided and practice-based experiences is central to the outcomes of the higher education provisions. It follows, therefore, that it is important to articulate principles and practices associated with the curriculum as experience. This is despite the unpredictability of the kind of experiences that may occur both within the educational program, but also when students participate in practice-based experiences. As foreshadowed in the previous section, central among considerations of how students experience the curriculum are differences in: (i) their readiness to participate, (ii) their interest in participating and (iii) confidence and competence to participate in experiences in practice settings.

As noted in the two previous sections, both of the intended curriculum and enacted curriculum need to take account of how students are likely to experience what is planned and provided for them. This includes student readiness, interest, competence and confidence as being central to how they engage in practice-based experiences and, therefore, come to learn in these circumstances and then reconcile them with the learning within their higher education program. Furthermore, consideration of the experienced curriculum seems to be particularly pertinent to work-integrated learning experiences. That is, many of the activities and interactions that comprise experience and practice settings occur beyond the reach of the teacher and the higher education institution. Rather than being positioned as students who are to some degree dependent upon the educational process, in practice settings much of the activities and interactions are the subject to the energy, commitment and intentionality of students as learners. In preview then, some key issues associated with the experienced curriculum are as follows:

- A lack of readiness to participate effectively in practice settings was reported across the projects for both domestic and international students.
- Different kinds and levels of readiness have particular implications (e.g. international students' lack of knowledge about social, institutional and local practices, domestic students' naivete and idealisation of selected occupations).
- The level of readiness is most evident when there are conflicts or contrary demands between workplace and university requirements.
- Need to view issues associated with readiness as a duality comprising (i) the students' experience and (ii) the requirements of the workplace and academic institution.
- The level of readiness shapes students' responses to the sequencing, duration and rotation of experiences in practice settings, and how they come to reconcile those experiences.
- Student interest is central to the quality of their engagement and learning in practice settings, and reconciling these experiences within the course of study.
- Immediate concerns such as performing adequately in practice settings are likely the focus of student interest.

- Identifying premises for student interest and engagement are likely to be quite salient for enacting and realising effective learning outcomes in practice settings.
- Student confidence mediates their engagement in practice settings.
- Early and staged engagement in practice settings seems to boost many students confidence to re-engage and learn effectively.
- Challenges to confidence and sense of competence through practice-based experiences can be redressed by effective group processes, including sharing of experiences.

In particular here, consideration is given to (i) student readiness, (ii) interest, competence and (iii) confidence as being central features of the curriculum as experienced.

### *7.8.1 Student Readiness*

The level of readiness for students participating actively in practice settings is likely premised on their knowledge of the workplace, the work undertaken and their capacities to understand or engage in that practice. For instance, as noted, the international students learning about social work in Australia are constrained by their relatively lower levels of readiness about institutional, social and personal circumstances with which they are required to be knowledgeable (Social Work project). Moreover, domestic journalism students engaging in media companies were also found to often lack readiness to work effectively in those environments (Communications and Journalism projects), as did the public relations students find it difficult and conflictual to work in groups. Sometimes, participation in the work practice can be a confronting and conflictual experience, and/or anticipated support and guidance may be absent (Public Relations project). Hence, not being ready for such experiences can be highly confronting and disarming. Then, there is the need to address or negotiate around the conflicting demands between what the practice setting and university are expecting of the student (Commerce project).

There is another dimension of readiness. That is the frequency by which students are confronted with wholly new experiences, which are required to be understood and integrated with what students already know. Too many novel experiences can prove to be overwhelming for learners, who will not be ready for such experiences (Medical Education and Education 1 projects). Yet, this readiness is often quite person dependent, because it is founded in what individuals know, can do and value. Indeed, recently, a hospital resident in an emergency care centre advised that the procedures which he finds tedious, boring and routine, are often wholly novel and sometimes overwhelming for his medical students. Consequently, time and opportunities for consideration of what has been experienced might be helpful for the reconciliation of new experiences and making sense of them. In a recent study of first year doctors, some of them reported that the nightshifts offer a situation in which they can consolidate what they are learning more effectively

than in the busy day shift. That is, at night whilst having responsibility for patients, the frequency and pace of the activities is more aligned with their level of competence. Consequently, they referred to these 'out of hours' experiences as being important for their learning because of the more measured demands made upon them (Cleland et al. 2014). Moreover, engaging with these experiences is shaped by dual factors: (i) different kinds of experiences are provided across placements and (ii) students construe of an engagement in what is provided in different ways (e.g. Journalism, Public Relations, Commerce, Law projects). Consequently, curriculum arrangements that rotate students through practicum experiences too frequently may serve to overwhelm and confuse students. For instance, staged participation in practice settings in terms of roles and duration may well be required in some disciplines, as indeed is currently practised.

All this suggests that student readiness is central to how they will come to experience what is enacted (as is again emphasised in Chap. 9 – Developing Students' Personal Epistemologies). The more intense, confronting and novel the experiences for them, the more likely that their readiness will be challenged and what is experience may not necessarily lead to productive learning. Consequently, considerations of the kind of activities and interactions students participate in, their preparation prior to those experiences and opportunities for more evenly paced activities and interactions and also those for consolidation of what they have experienced and are learning are likely to be important considerations for maximising the efficacy of what has experienced.

### *7.8.2 Student Interest and Agency*

Given the importance of students' intentional and directed engagement in these learning processes, their agency will be central to the quality of their participation and learning (Creative Arts project). Yet, this agency was found to be quite variable across student cohorts (Public Relations and Music projects). Even the most authentic and rich learning setting and experience will be considerably weakened should students not engage effectively and effortfully and or with interest. That is, the degree by which their engagement is characterised by agency and intentionality is likely to be central to the quality of their participation and, therefore, learning. Across the fellowship projects, generally, it seemed that students were interested, and even eager, to engage in practice settings (e.g. Music and, Journalism projects). This is important because beyond the interest to participate in practice settings is the effortful process of making sense of those experiences and then integrating (i.e. reconciling) them with what they have experienced elsewhere and doing so in a critical and informed way. All of these processes require significant effort on the part of the learner which is unlikely to be forthcoming unless the motivation or interest to do so is high. For instance, as it has been noted above, it is often immediate concerns that most directs students' effort and engagement (Health Sciences, Creative Arts, Teacher Education, Medical Education projects). Therefore, what might be important to and enacted by their teacher or intended in the curriculum,

may be quite different from what directs students' energies and intentionalities. In addition, processes associated with the formation of professional identity may well also require high levels of student interest and engagement.

Consequently, students' interest and agency underpins how come to engage with what is provided for them (i.e. the enacted curriculum) thereby highlighting the importance of the 'experienced curriculum' and emphasises the salience for finding ways of building and directing that interest and engagement.

### *7.8.3 Student Confidence and Competence*

Not surprisingly, engaging in and, in particular, being asked to perform in an environment which is new and uncertain raises issues about student confidence and how they will engage in those tasks and settings. Whilst a key outcome of engaging in practice settings has been shown to be the development of personal confidence (Commerce project), the fact that this has been raised as an important finding indicates it represents a challenge for students. This confidence can also be undermined when it is not clear what is being expected of students (Public Relations project). As noted, the conflictual issue that students will likely face include differences in the requirements and demands of the practice setting and university. How students reconcile these differences is like to be premised upon their competence and prior experience.

Hence, a key concern is to build confidence in students so that they have the capacity to be effective, productive and competent in their workplace experiences (Communications project). In addition, the importance of staged engagement in practice settings (Teacher Education project) plays out here as well. From curriculum as experience, a key precept is that rather than commencing what the course intends, that the focus should be on the students' experiences and learnings from practice settings and then assist them make links and associations with the content to be taught from those experiences (i.e. putting the experienced curriculum centre stage) (Business 2 project). Some reflections on personal histories may be helpful in assisting map student transition to new occupational identity and roles (how they came to this), where they had been before (Communications project).

In these ways, the concept of the experienced curriculum stands as being central to considerations of curriculum, and more broadly the higher education project and, in the context of this book, how students will come to engage in practice-based experiences and then seek to reconcile what they've learnt through those experiences with their higher education program.

## 7.9 Considerations of Curriculum

In sum, this chapter has proposed that considerations of curriculum extends beyond what is intended for students to engage with and learn as often captured in syllabus documents, course outlines and subject profiles. Even the most thoroughly

researched, well-developed and detailed statements of the intended curriculum can only ever be that: intentions. Clearly, the more informed and researched the intended curriculum is, and its responsiveness to the range of factors including student readiness that shape its effective enactment, the closer what is implemented and engaged with by students will to prompting their engagement. In this way, the intended curriculum cannot be restricted to just the views, contributions and preferences of individuals and agencies external to where the programs are enacted and experienced. Instead, those who are involved with its enactment need to be informing the intended curriculum and also insights from or direct engagement with students may also be helpful in developing intentions that are more likely to be realised when enacted and experienced. It has also been proposed that there are a range of situational factors which shape the enactment of the curriculum. These include location, access to work experiences, and the attitudes and capacities of teachers, as well as the readiness and interest of students. All of these factors shape how what is intended is actually enacted. Then, finally and, perhaps most importantly, is the concept of curriculum as experienced. Ultimately, the educational project should be centred on students' learning and how students come to construe and construct knowledge is not dictated by intentions or what is enacted. Instead, it is individuals' (e.g. students') engagement with, construction of and intentionality in engaging with what has been enacted which ultimately leads to their experiencing and their learning. It is this range of factors than which constitutes considerations for curriculum.

However, beyond the provision of experiences is the ways in which these experiences can be enriched or augmented for students by teachers, workplace supervisors and the provision of particular kinds of experiences which have pedagogic properties. It is these sets of factors that are addressed in the next chapter, focusing upon pedagogic practices that can be used to assist the optimisation of practice-based experiences and their integration with the learning students are undertaking in higher education courses.

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# Chapter 8
# Pedagogic Practices Supporting the Integration of Experiences

## 8.1 Pedagogic Practices

Beyond the organisation of students' experiences in both the university and practice setting, as in deliberations about curriculum, there is a need to consider how to augment and enrich those experiences. This is often necessary to maximise and direct students' learning towards intended learning outcomes and secure the full educational worth of these experiences. The point is often made that workplaces are not educational settings and their priorities and processes are about providing services and producing goods, not promoting learning (Eraut 2004; Marsick and Watkins 1990). So, whereas the intentional purposes of educational institutions are to promote learning, this is a subsidiary concern for workplaces. Consequently, despite their many important contributions to students' learning, there can be little confidence that the provisions of experiences in workplaces will be effectively directed towards the kinds of learning that students require (Eraut 2011). Moreover, workplaces do not always have the resources and capacities to provide the kinds of opportunities to effectively organise and enrich students' learning experiences (Fuller and Unwin 2004; Newton et al. 2009), when dealing with errors, for instance (Baumgartner and Siefried 2014). Nevertheless, in some workplaces these forms of support are either available or embedded within the work practices. For instance, in some industry sectors, such as health, there are long-standing traditions associated with assisting the learning of novice doctors, (Dornan et al. 2007), nurses (Newton et al. 2011), physiotherapist (Molloy and Keating 2011) and midwives (Sweet and Glover 2011). However, these are the exception and even in these circumstances the provision of adequate experiences cannot be relied upon (Richards et al. 2013). Hence, whilst the support of and experiences provided in workplaces is important and helpful, the key responsibility, quite rightly, for higher students' learning resides within the institution that enrols them and the teachers who have responsibility for promoting their learning.



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Therefore, beyond securing placements for higher education students in practice settings, their organisation and ordering, other efforts are required to optimise their educational worth (Cooper et al. 2010; Eames and Coll 2010; Orrell 2011). These include finding ways of supporting their learning before they participate in practice settings, during those experiences and through deliberately attempting to integrate what they have learnt in those settings into their program of study. Hence, there is often a need for interventions (i.e. pedagogic practices) by those who teach in higher education institutions, and also by those supervising students in practice settings. As introduced earlier in this book, pedagogic practices are those that can augment students' learning experiences, in ways that go beyond the organisation and ordering of experiences. In educational programs, such pedagogic practices are most likely to be the kind of strategies, approaches to student engagement, activities etc. that teachers aim to provide for those students to secure rich learning (Diakidoy and Kendeou 2001; Vosniadou et al. 2002). Also, those practices can extend to what workplace practitioners or supervisors can do to enrich students' experiences and learning (Billett 2000). Although much of this augmenting of experiences is usually seen in terms of deliberate interventions, it can also extend to everyday practices in workplaces that inherently promote learning. For instance, there are particular activities which have been long identified as being pedagogically-rich. These activities include doctors' and nurses' handovers, morbidity and mortality meetings, production meetings, planning and evaluation sessions, grand rounds (Billett 2014). There are also activities such as peer-based focus groups and discussions, which may serve similar purposes, yet not explicitly organised by teachers (Newton 2011; Richards et al. 2013). So, the key focus for this chapter is to set out some bases for how interventions in the form of pedagogic practices might be utilised, principally be but not constrained to what teachers in higher education institutions can enact.

It is proposed here is that the need for such interventions occurs prior to students engaging in practicum experiences, during those experiences and then, importantly, after the completion of those experiences. A key principle in the approach adopted here is that such practices and interventions are that they can readily be a part of higher education teachers' work activities. That is, rather than having hybrid processes or costly infrastructure which is unsustainable over time, the focus here is to identify pedagogic practices that can adopted by busy teachers and can become part of their teaching practices. These pedagogic practices can include conscious efforts to try and direct students' learning in particular ways and for specific educational purposes. As advised earlier, there are likely to be specific contributions provided for students in both higher education and practice settings, each with its particular strengths and limitations. So, there is a need to identify, select and utilise appropriate pedagogic practices both in the university and practice setting, to optimise the intended learning, which can include marginalising the limitations of each kind of experience. For example, students returning from practicum experiences often make statements such as "I have learnt more in that experience than in the 2 or 3 years in my university course". Such comments, while likely reflecting the coming together of a range of contributions from practice

settings, are quite unreflective. They need to be engaged with critically so that students are aware of the different kinds of contributions to their learning, and from where they were sourced (Marsick 1988; van Woerkom 2003). Not the least here is the concern that beyond initial occupational preparation, which is usually supported by teachers, educational programs, organised experiences etc., much of the ongoing learning across workers' lives will be based upon their own efforts, intentions, and capacities (i.e. their personal epistemologies) (Cervero 2006). Therefore, assisting them come to be reflexive and understand how they might learn effectively across their working lives is an important educational goal within preparing individuals for their occupations.

A very consistent finding across the projects comprising the two fellowships is that more than providing experiences for students, is a need to enrich these experiences by: (i) preparing students for the experiences, strengthening their engagement, and finding ways of collective reflection on those experiences (Public Relations; Education 1 and 2 projects); (ii) considering the variations and variability of workplace experiences through students' different and diverse internship experiences; and (iii) participation in an experience, such as post-internship peer engagement session (Journalism project), that permit students to share their learning and reconcile their experiences. So, a clear set of needs was identifiable from this set of projects across diverse disciplinary fields emphasising the importance of enriching students' learning from their experiences in work settings. This includes explicitly associating, linking and integrating them with what they are expected to learn in their educational programs. So, actions need to be taken to secure the educational worth of these experiences. That is, the use of appropriate pedagogic practices.

Much of the consideration here is based on understandings about teachers' use, adaptation and adoption of these innovations, Findings indicate that unless teachers are convinced of the worth of such practices and can make them work effectively in the absence of guidance and support, they are unlikely to adopt these practices as their own (Mclaughlin and Marsh 1978). So, it is important that these practices are seen as being helpful and usable by those who teach. Importantly, although increasingly directed by and subject to external requirements (Grealish 2015; Hungerford and Kench 2015) and internal suggestions on how to proceed with teaching-related activities, ultimately these such activities are enacted in the relative privacy of teachers' classrooms. Hence, they are not readily subject to external monitoring, they are based on teachers coming to value and find helpful such practices. Moreover, this concern is particularly relevant in contemporary times. Many of those teaching in higher education institutions are subject to a range of demands on their time and energies. So, just like their students, most likely teachers in higher education are increasingly becoming 'time jealous': that is being strategic about how they use their time and allocate their energies. This is because in the era of mass higher education those teaching in universities are increasingly subject to intense workloads and being stretched to meet performance indicators in research, teaching and service. Hence, they are being pressed to increasingly make strategic decisions about how they allocate their time and what activities they should direct

their energies towards. All of this is simply to suggest that the kinds of pedagogic practices advanced here are premised on principles associated with being able to be used as part of everyday practice by busy academics.

However, teacher competence, time and resources are not the only considerations for how pedagogic interventions might progress. Instead, the main set of factors shaping how to effectively utilise and integrate experiences in practice settings are premised upon what students and their teachers reported as being required. From a review of findings from the 25 projects across these fellowships (Billett 2009, 2011), some suggestions for pedagogic practices are advanced. These practices are identified, discussed and recommendations made under three headings: what might be provided: (i) before, (ii) during and (iii) after students engage in practice-based experiences of different kinds (e. g., practicum, clinical placement, work experience, paid part-time work etc.). More than being a convenient and linear organising scheme, this division acknowledges that, for sound educational purposes, there are interventions that might best occur before students engage with experiences in practice settings as discussed in Chap. 6 (i.e. Key Findings About Integrating Experiences) and Chap. 7 (i.e. Curriculum Considerations: The Integration of Experiences). Similarly, the findings suggest students may require support in or augmentation of their experiences during their practice-based experiences, as also noted in those chapters. Then, the findings consistently suggest that the provision of guidance and support may be required to when students have completed their practice-based experiences to more effectively consider, share and otherwise optimise the outcomes of those experiences. It is these three considerations that are discussed in the following sections.

In preview, the pedagogic practices that arise from the project data are as follows. Prior to the practice experience, it is helpful to:

- Establish bases for experiences in practice settings, including developing or identifying capacities in practice settings (i.e., practice-based curriculum, interactions);
- Clarify expectations about purposes, support, responsibilities etc. (i.e., goals for learning);
- Inform about purposes, roles, and expectations of different parties (e.g., advance organisers);
- Prepare students as agentic learners (i.e., develop their personal epistemologies) – including the importance of observations, interactions, and activities through which they learn;
- Develop the procedural capacities required for practice; and
- Prepare students for contestations (e.g., being advised to forget everything learnt at university).

During practice-based experiences, it is helpful for there to be:

- Direct guidance by more experienced practitioners (i.e., proximal guidance);
- Sequencing and combinations of activities (i.e. ‘learning curriculum’, practice-based curriculum);

- Active engagement in pedagogically rich work activities or interactions (e.g., handovers);
- Effective peer interactions (i.e., collaborative learning); and
- Active and purposeful engagement by learners in workplace settings.

After practice-based experiences, it is helpful to:

- Facilitate the sharing and drawing out of experiences (i.e., articulating and comparing – commonalities and distinctiveness e.g., canonical and situational requirements for practice);
- Explicitly make links to what is taught (learnt) in the academy and what is experienced in practice settings;
- Emphasise the agentic and selective qualities of learning through practice (i.e., personal epistemologies); and
- Generate critical perspectives on work and learning processes in students.

As noted, some these pedagogic practices will be more applicable to particular occupations than others. Moreover, these listings offer a starting point for considering the integration of experiences in university and practice settings. Some of these seem so obvious as to hardly be worth mentioning. Nevertheless, it is these activities which are consistently reported as being effective and yet problematic in their absence. That is, even those that appear obvious are not always being practised. It is proposed that such a set of activities can be used in a number of ways. For instance, they can inform how practice might progress, be bases for the enactment of supporting student learning, and for also evaluating both the process and outcomes of those experiences. With these kinds of purposes in mind, it is important to align the kinds of experiences that are provided for students with particular intended outcomes. Consequently, in the next section, some consideration is given to the alignment between particular educational purposes and pedagogic practices.

## 8.2 Purposes and Pedagogic Practices

In Chap. 3 (i.e. Educational Purposes of Integrating Experiences in Practice and University Settings), a set of educational goals for integrating work-based experiences within higher education programs were delineated, and described in detail. These goals are associated with:

- Learning about an occupation;
- Learning about some of the various forms of that occupation;
- Extending the knowledge learnt in university settings;
- Orienting to the kinds of places where the occupation is practiced;
- Building the occupational capacities (i.e. canonical, conceptual, procedural and dispositional) required to be an effective practitioner of that occupation;
- Developing occupationally specific forms of knowledge and procedures required for particular practice settings;

- Developing more broadly applicable learning that is not restricted to the requirements of a particular setting; and
- Meeting requirements of occupational or professional licensing.

Whilst not exhaustive, this listing of educational purposes is potentially helpful for considering the particular kinds of educational intents that can be realised through practice-based experiences being utilised in higher education programs. It also indicates that quite distinct approaches and educational processes are likely to be required to achieve these purposes. As discussed in Chap. 3 (i.e. Educational Purposes of Integrating Experiences in Practice and University Settings), educational processes are to be quite intentional and the planning of experiences to achieve the particular intended outcomes, quite deliberate. Hence, educational processes should be guided by clear goals. However, it is also acknowledged that these goals are nothing more or less than what is intended to be achieved (Brady and Kennedy 2003). There can be no guarantees that the experience provided for students will lead to the particular intended or desired outcome (Eisner and Vallance 1974). They are nothing more than intentions. Nevertheless, because of concern to realise what is intended, part of the consideration of pedagogic practices is how students will engage. Often, from teachers knowledge of their students, the kind of content they are teaching and how best they can achieve the intended kinds of learning outcomes is most important for educational decision-making (Brewer 1978; Skilbeck 1984). Yet, part of the teacherly practice is also an awareness of what experiences are likely to generate what kind of student outcomes. For instance, educational processes aiming to assist students' learning make decisions about preferred occupations or occupational specialisations, might include opportunities for students to observe those occupations in practice and then discuss with other students and their teachers (Billett and Ovens 2007). Such a pedagogic intervention as these group discussions is quite distinct from those that aim to develop their students' procedural capacities required to practice an occupation. That is, the latter purposes are associated with developing the skilfulness, which inevitably requires opportunities to observe the performance, engage in imitative and approximate versions of those performance, and then having opportunities to rehearse them to refine and hone (Fitts 1964; Sun et al. 2001). Through these means students can develop the occupational-specific procedures in ways that can be used effectively in work settings.

So, differences in educational intents have clear implications for the selection of the kinds of pedagogic practices that can support this learning. Returning to the examples of the different educational intents above, the former requires access to workplaces and opportunities for students to consider and appraise their experiences; the latter requires guidance in the use of procedures and then securing opportunities for practice in ways which are benign in terms of the impact on others. Hence, in health care work, often these specific procedures are developed within clinical learning spaces using mannequins, substitutes for human tissue and, occasionally, other students, again reminding of the appropriateness or otherwise of certain practices to different occupations.

One way of exercising educational intents is to consider these intended outcomes hierarchically. These are usually seen in terms of aims, goals and objectives (Brady and Kennedy 2003; Print 1993). Goals and aims are likely to be most helpful in organising the structuring of the experiences for students (i.e. sequencing, duration, timing, engagement), as in the intended curriculum and considerations for its enactment. However, more detailed statements of purpose in the form of objectives are likely to be very helpful for specifically enriching experience for particular purposes (i.e. the selection of pedagogic practices). Consequently, these educational intents can be helpful for selecting and organising learning experiences for students, including identifying what pedagogic practices are helpful in achieving the desired outcomes. So, general statements of educational intents (i.e. goals) can be used to make decisions about the breadth of learning required and the sequencing of learning experiences. The intents associated with more specific learning outcomes can guide both instruction and assessment (i.e. educational objectives). They can also inform individuals in practice settings (i.e. supervisors, skilled practitioners, clinical supervisors, preceptors) about the requirements, expectations and desired outcomes to be realised through students' educational experiences, and how they pedagogic practices can assist in enriching them.

In Table 8.1 below, the educational purposes set out and elaborated in Chap. 3 (i.e. Educational Purposes of Integrating Experiences in Practice and University Settings) are aligned with the kinds of pedagogic practices that can realise those purposes. The suggestions about those practices are based upon what might be applicable before, during and after the practicum experiences that are intended to realise these different purposes. Hence, the table aligns the set of educational purposes that were elaborated in Chap. 3 with the sets of pedagogic concerns outlined above in this chapter. That is, a consideration of: (i) what kind of support is required prior to students engaging in practicum experiences; (ii) during those experience; and (iii) after those experiences are completed. The propositions set out in each of the boxes arose from findings across the two fellowship projects so are based on practice. However, these set of propositions are not complete, comprehensive, or exhaustive. They represent a set of suggestions. Moreover, they are open to criticism and contestation, and through that, refinement, but most importantly, hopefully enhanced applicability. Looking across the matrix provided through bringing together these purposes can be, in part, addressed through particular kinds of pedagogic activities.

So for instance, taking just one of these propositions – extending the knowledge learnt in university settings – it is possible to propose the kinds of pedagogic practices that can assist realise that goal before, during and after the students engage in workplace experiences. So, in this table it is suggested that prior to students engaging in the workplace, they might be prompted to consider what kind of knowledge they have learnt is likely to be applicable to the setting and its work activities. What does being an engineer in this particular workplace mean? In one program, were there were only short periods of time available for practicums (i.e. clinical placements) a deliberate strategy was engaged to prepare the students so that when they arrived in the hospital ward they were aware of its physical layout, the

**Table 8.1** Matrix of purposes and processes

| | Pedagogy | | |
|---|---|---|---|
| Educational purpose | Before practicum experience | During practicum experience | After practicum experience |
| *Learning about the occupation* | Understanding requirements for appropriate engagement and occupational norms and practices | Guidance by experts, opportunity to ask questions and understand further | Opportunity to reflect upon the occupation and how it meets expectations and preferences |
| *Learning about variations of that occupation* | Basing experience on what individuals know and seek to know through these visits | Guidance by expert partners to delineate differences and distinctions in occupational practices | Opportunity to reflect upon variations in occupational practice and be advised about particular requirements |
| *Extending the knowledge learnt in university settings* | Consideration of the applicability of the occupational knowledge to the settings | Guidance by more expert partner who will press students to make links to what was learnt in the academy | Focus group activities for students to share and compare experiences and their applicability to the occupation |
| *Orientations to the settings where the occupation is practiced* | Setting out the opportunity and support for understanding work practice, ahead of real experiencing | Actively seeking to compare and contrast across occupational settings | Organising process of comparing and contrasting students' experiences |
| *Building the occupational capacities required to be an effective practitioner* | Advising and guiding students to understand the kinds of knowledge to be learnt | Opportunities to practice, engage with kinds of knowledge required for effective practice | Opportunities to reflect and share with others about their experiences and making these generative of robust occupational knowledge |
| *Developing occupationally specific forms of knowledge required for particular practice settings* | Understanding distinct requirements in each workplace and how these are different across work settings | Opportunity to understand and develop procedural capacities associated with particular work settings | Opportunity to reflect and share with peers the commonalities and differences among practice settings, and requirements to be effective |
| *Meeting requirements of occupational or professional licensing* | Being explicit about the kinds of knowledge to be learnt and how it will be learnt | Opportunities for indirect and direct guidance in building capacities | Reflecting upon what has been learnt and comparing and sharing with others in relation to required standards |

kind of treatments that are usually provided there, and the kind of pharmaceuticals that were used in such a ward (Newton et al. 2011). In this way, the students were 'advance organised' (Ausubel and Novak 1978) so as to maximise their learning in a relatively short period of clinical experience. In terms of what is proposed during the students' engagement in the practice setting, Table 8.1 proposes that students might be encouraged to actively come to understand the scope of practice of those different occupations working on a hospital ward (e.g. nurses, doctors, physiotherapists, social workers and hospital orderlies). That is, a particular allocated task for students might be to distinguish separate areas of practice and where there are overlaps and intersections across the work of these different practitioners. Such a task can assists students understand something about the boundaries of their practice and others which is essential when working in environments where there are a range of disciplines engaged in collaborative tasks (Molyneux 2001; O'Keefe et al. 2011). Then, there is also a consideration given to what occurs after the students have completed their practice-based experience. It is suggested that as a means of extending the knowledge learnt in the university program, students might be engaged in individual or groups activities in which they can compare and contrast their experiences of the occupation and how it is practised in a range of settings (Journalism, Business 2, Chiropractic projects). Such processes may well have to be set up and guided by teachers in order for that to be effective engagement, and informed outcomes. So, in this kind of a way, this table can be used to consider how pedagogic practices can support each of those seven different kinds of educational purposes.

The following sections offer considerations of what kind of pedagogic practices might be adopted before, during and after the students have had experiences in work settings. The goals here are twofold: (i) to attempt to maximise the learning that arises from those experiences, and, (ii) to optimise the integration of what is learnt through those experiences into the overall programme of learning in which students are engaged in their higher education program. So, first up, consideration is given to what might be enacted prior to students engaging in practice experiences.

## 8.3 Prior to Engaging in Practice Experiences

As noted, there was clear agreement across the projects comprising both fellowships that, more was required than providing or getting students to engage in activities in practice settings. It was commonly suggested that there is a need to enrich their experiences through preparatory experiences (Public Relations; Education 2). One way this could be achieved is to enact interventions prior to students' engaging in practice settings. These preparatory processes were reported by students to be of greatest value when they:

(i) Come before the first practicum experience
(ii) Are strongly focused on discipline-specific information and procedures, rather than content which they perceive to be irrelevant or untimely

(iii) Use their time effectively
(iv) Draw upon their existing experience
(v) Provide opportunities for developing procedural capacities (i.e. how to do things) (Allied Health).

Each of these considerations arose from specific points made by students and observational responses about what is provided for them. Importantly, the kinds of understandings that teachers and experienced practitioners might take for granted may be unknown by novices, such as students. For instance, practical information such as briefing students on how to act in workplaces, how to dress appropriately, their expected attitude towards work and others in the workplace, can all contribute to increasing the chance that their practicum experiences will be productive and learning outcomes will be positive, as was evident in the journalism project (Journalism project). Where appropriate, these preparations can be extended to the use of action planning and simulations, which were included in the Applied Theatre project, or were there particular demanding aspects of the work which might be difficult or confronting for students, such as in the human services project (Cartmel 2011). Also, the use of substitute activities is helpful to develop students' capacities to perform effectively, as occurred in the 'Street Law' project, and to prepare them for particular kinds of engagements or interactions in high schools. Indeed, within the healthcare sector it is now almost standard for students to develop many of the procedural capacities they will require to practice in health care settings in clinical skill laboratories prior to engaging in practicum experiences. Often this development is associated with practicing and honing dressings, sutures and other specific procedures. It also extends to assisting medical students learn to use stethoscopes, where mnemonics are used as a pedagogic practice to assist the identification of heart conditions through the sounds they make and, therefore, perform effective diagnoses (Rice 2008). In these situations, the concern is to prepare students with practical capacities they can then apply in their placements. However, in these instances this initial preparation is understood as being only foundational and preparatory. Placing dressings on patients is very different than doing so in the clinical laboratory on a manikin. Trying to diagnose a heart condition using stethoscopes requires also negotiating with the patient and trying to ignore many of the other sounds which the body makes and which are amplified through the stethoscope. Nevertheless, these are important foundational skills which then provide the bases for the practice in the healthcare setting to be effective. That is, to extend the scope of the students' zone of potential development so they are able to engage and extend that zone themselves.

More generally, pedagogic activities can be used to assist students' orientation to the particular occupation in which they hope to find employment. Many students select their occupations without ever having experienced them in practice. So, opportunities to actually observe the occupation being enacted can be a very important educative process, not only to experience the occupation per se, but also to understand some variations of it. For instance, the kinds of tasks required for print journalism may be quite different from those required for broadcast

journalism. Equally, the kinds of journalism required in a large or small broadcast or print workplace might be quite distinct (Journalism project). Therefore, providing an opportunity to understand more about the occupation can be helpful prior to students engaging in settings where the occupation is practiced. However, access to observing occupations is not always straightforward as many cannot be easily observed. For instance, in the creative arts project, students developed an industry research portfolio to help them engage with and understand the sector in which they would engage. This was adjudged by graduates as being helpful in assisting their transition to work, in this case in the creative industries, which largely comprised of individuals working as sole traders (Creative Arts project). Hence, understanding this sector was not a case of going into and observing these workers in a large workplace (which does not exist), but rather coming to understand the sector through gathering information about the kind of work that practitioners do and how they undertake that work.

Moreover, students are likely to have their own views about what would most effectively prepare them for their practicum. In the project with medical students, the teacher had organised group discussions of cases. However, these were replaced, on request from the students, with a problem-based learning strategy. In their preferred option, the case was presented, and the group of participating students given time to consider the information, reflect, and pose possible diagnoses, problems and management strategies (Medical Education project). This pedagogic strategy to extending their learning was seen by the students as a useful way of developing the procedural capacities for clinical reasoning, including the requirement to combine series of procedures and test propositions, thereby building the students' capacities for more strategic kinds of development required for that reasoning. This activity included being able to utilise and combine a range of specific forms of knowledge to consider and evaluate the overall complexities of patients' conditions, and identify possible scenarios for treatment.

One key factor shaping preparatory processes is students' needs associated with performing effectively in practice environments. In particular, if they are required to perform as novice professionals (to have hands-on patients, for instance), there may concerns about whether or not they will be competent with these procedures, which will likely be a priority for their learning. Whilst they may have come to understand the requirements for completing effectively in university-based activities (e.g. writing assignments, examinations, participating in tutorials) they are, understandably, often less confident about performance in practice settings (Molloy and Keating 2011). Indeed, key concerns associated with establishing effective learning experiences for students include developing awareness of and the capacities to be effective within those settings. There is clearly a range of capacities that students will require to engage in those settings; the extent to which this development is required in each instance depends on the roles they will be assigned in the practice setting. There will, of course, be significant differences between the capacities required by students who are engaged in observing and being oriented to a workplace and when they are actively engaged in the occupational practice. Both of these kinds of experiences are necessary and helpful. However, for

both, students might well need to be actively engaged to maximise their learning from those experiences. For instance, insights about effective day-to-day practices that enable students to understand and rehearse professional skills were reported as being greatly valued by students in education and media courses. These experiences assisted raising awareness of the need to have both procedural and conceptual capacities as was the case in the 'street law' education project. This project required law students to explain law concepts to high school students and have appropriate examples available. Assistance with understanding the requirements for performance, particularly when they are unaware of or new to these requirements, were perceived to be very helpful by these students. Procedural preparation (i.e. having the capacity to undertake occupational tasks) was also highly valued by education students, when this preparation was directed at preparing them for their practice requirements, in a teacher education course, for instance. In this particular situation, it was from observing what occurs in classrooms that focused the education students' attention on the need to develop the kinds of capacities to effectively manage students' classroom experiences.

Therefore, preparation that promotes understanding the occupational practice and the ability to perform aspects of that practice (i.e. specific procedural knowledge) is clearly welcomed when it has identified applicability to students' upcoming practice, as is evident in studies of nurse preparation (Benner 2004; Henderson et al. 2006). Other capacities may also need development before students engage in practice settings. For instance, it was found that many students lacked the level or kind of inter-personal skills to manage effective client or workplace relations, as was the case in the public relations and media projects. So, the development of capacities prior to students' engagement in practice-based activities may be essential when there is a requirement to perform specific roles. Also, as noted, student confidence is also associated with being able to perform these kinds of skills (Applied Theatre, and Commerce projects). It may be necessary, therefore, to build or support students' confidence, to support their procedural capacities to be effective, productive and competent in their workplace experiences (Journalism project). The demanding and time pressured nature of that sector requires that those working in it need to be quite strong and assertive, it seems. Therefore, issues of confidence and productivity are likely to be important for students to engage effectively in such environments, and strategies to assist their readiness to practice will likely be engaged with by students facing such challenges.

It may also be necessary for students to be aware of the boundaries of what is reasonable and unreasonable for them to be engaged in the workplace. This is of growing importance, given the growing numbers of students engaging in work experience across a greater number of workplaces, many of which have had little experience of such arrangements. So, whereas in those sectors where there is a tradition of student engagement (e.g. health care) there are probably clear guidelines about the extent of the tasks and discretion afforded them. Yet, even in those circumstances students can be engaged in tasks beyond their competence. For instance, in the midwifery project it was reported that sometimes on the first clinical experience these students are asked to assist directly with the birth including

holding in guiding the baby's head (Sweet and Glover 2011). So, students could find themselves engaged in tasks which are beyond their level of competence (i.e. zone of potential development). Moreover, given the diversity of students' background and prior experiences of work, and occupational practice prior to engaging in their work placements, simple assumptions about the readiness of a cohort of students (i.e. what first year nursing or social work students can do) may be erroneous. Conversely, students may be overly hasty and avoid engaging in effective preparatory activities because they do not believe this is important. Without these understandings, it may be far more difficult for them to achieve the kind of outcomes that are intended to arise from their workplace experience, and to effectively manage themselves and their relationships in their host organisations.

There is also another kind of preparation that is required to assist students in their practice-based experiences. That is, to manage conflicting and confronting experiences. Unfortunately, workplaces are often far from benign environments and are usually focused on the production and service goals for which they exist. Hence, students may encounter experiences that can be confronting and unpleasant, including direct contestations. These kinds of events cannot be anticipated and, in most instances, factors that lead to negative experiences are out of the control of those who teach in higher education institutions. For instance, in an earlier study involving nursing students, one was greeted at the beginning of her clinical experience by her preceptor saying, "I don't know what you are going to be doing the next 2 weeks but I'm won't be helping you" (Newton et al. 2011). More commonly, students will be confronted with statements such as "forget that rubbish you've learnt at university, this is the way we do things here". Therefore, it may be useful to engage students in scenarios where they may confront belligerence, individuals being dismissive, or being treated inappropriately. In the second instance, it is important that students are positioned so they can make informed judgements about whether what they are experiencing is helpful, or whether they should carefully evaluate what they have been taught in both higher education institutions and workplaces (Richards et al. 2013). Being prepared with concepts and strategies to deal with these situations may well be helpful not only in the short term, but also in the longer term as these events are not restricted to students' experiences. In a previous project, learning circles were used for human services students (Cartmel 2011) to prepare them for the kinds of contestations that can occur in that sector. In these interventions, the students met and discussed these matters before their placements and then took the opportunity to reflect on any such experiences as part of a supportive group during their period of practicum experiences.

Consequently, it is necessary to consider preparing students for such environments and experiences. Firstly, some workplaces can be difficult to engage with and may not always have appropriate expertise, let alone capacity, to support productive experiences, as was evident in the public relations course. Hence, students need to be prepared to be active and enquiring, and to determine in what ways they should best engage in workplace activities and interactions. For instance, students who undertake work experience in small or not-for-profit businesses may possess far more knowledge about their field than those with whom they are working

and advising. But in these situations, they will be able to secure expert advice and guidance of the kind available where expertise is available. Hence, students will have to rely on their zone of potential development (Valsiner 2000), which may or may not be appropriate. The latter was evident in one project in which students from a public relations course were working with volunteers in not-for-profit organisations who had little understanding of public relations or how it might be used appropriately for their agencies. So, not only was there lack of expert guidance to support that learning, but there were particular skills that students needed to be effective in those placements, which they had not yet developed.

Secondly, there can be conflicting demands or requirements between those of the workplace and university, as was found in the commerce project in which students engaged in workplace-based business projects. That is, the particular requirements of the university course were not always well aligned with the kinds of activities the students were invited to participate in workplaces. In these circumstances, students may require applicable strategies, including being forewarned that such events might occur. This can be followed by engaging with them to consider the best ways of addressing and dealing with these issues, including how to respond appropriately and are helpful for their progress and development. Thirdly, students might be advised about how their experiencing of the environment, including contestations, may play out in quite individual or personal ways. What is a productive and worthwhile work experience for one student may be quite unhelpful, confronting or even counter-productive for another, depending upon issues such as race, gender or ethnicity. Hence, how students make sense of and learn through these experiences will be shaped by their goals and purposes, as well as what they know, can do and value. All of this suggests that particular pedagogic practices may be required in different ways to support students and may be even redundant for some students, whilst essential for other students. Other strategies suggested in the projects include using role plays, which was the case in the teacher education program, the use of explicit strategies to make links between what students have already learnt and the requirements for their practice which occurred in applied theatre, and students developing and engaging in 'reading circles' for this purpose in the same program.

Another important consideration for the exercise of pedagogic practices is how best to constructively engage 'time-jealous' students to maximise their practice-based experiences. As noted, across the projects, it was found that, in many instances, students greatly valued their time, guarded it jealously, and only wanted to engage in experiences that were immediately relevant and pertinent to their current or forthcoming activities, including assessments. In the healthcare project mentioned earlier, students were provided with a preparatory program for their practicums about which they complained strongly and vociferously about its timing, how it was organised and the relevance of much of its content. This program had been provided successfully to another health care discipline (i.e. physiotherapy) successfully for many years. However, the Allied Health students were quite

emphatic that this was not a positive experience. In their feedback, some ways they suggested that these experiences could be made more useful for them are by:

(i) Providing opportunities for students who have completed placements to talk to and advise students who have not;
(ii) Making the sessions interactive;
(iii) Using electronic means to provide the course content;
(iv) Having more opportunities for discussion;
(v) Providing notes and materials that students could refer to later; and
(vi) Explaining more clearly the purposes of the sessions and their practical applications (Allied Health project).

When implemented in ways that meet students' needs, augmenting preparatory experiences through the particular pedagogic practice can be helpful in assisting the practice-based experience be more effective. Noteworthy here is that much of the feedback emphasises that the quality of these experiences goes beyond providing students with information, although this is most welcome when students want to know it, such as the requirements for their practice experiences. Instead, the students emphasised having the opportunity to discuss and consider various scenarios that may affect the quality of their learning experiences and how these are aligned with their educational goals. Moreover, experiences at this point in the process provide bases for shared and collaborative activities during and after experiences in practice settings.

In conclusion, before commencing their practice experience, it is probably helpful to engage with students to:

- Orientate them to the requirements for effectively engaging in the workplace;
- Establish bases for experiences in practice settings, including developing or identifying capacities required for practice settings (i.e. practice-based curriculum, interactions);
- Clarify expectations about purposes of, support in, and responsibilities of parties in, practice settings etc. (i.e. goals for learning, how to engage);
- Inform about purposes, roles, and expectations of different parties (e.g. advance organisers);
- Inform about and prepare students to engage as agentic learners (i.e. develop their personal epistemologies), including the importance of their observations, and engagement in the workplace interactions, and activities through which they will learn;
- If required, develop the procedural capacities required to be effective with tasks in the practice setting; and
- Prepare them for contestations that might arise in the practice setting (e.g. being advised to forget everything learnt at university).

Having given consideration to some of the experiences that might be organised prior to students engaging in workplace settings and activities, the next section addresses how students' learning can be augmented during those placements.

## 8.4 During Practice-Based Experiences

In nearly every project across the two fellowships, students reported that practice-based experiences were important, necessary and, in the majority, very helpful learning experiences. Indeed, across a number of projects, engagement in authentic work-based experiences was reported to be generative of a range of identifiable learning outcomes. The scope of these outcomes spanned a range of kinds of knowledge required for occupational preparation and particular contributions within them. That is, the development of what the students can do (i.e. procedural capacities), know (i.e. conceptual capacities) and values (i.e. dispositional capacities), including the transformation of perspectives, which was reported explicitly in the cases of the Law and Chiropractic projects. Collectively, it was reported that these experiences engaged students in activities that permitted them to observe and experience the occupational practices they had selected as their preferred occupations and learnt about what they constitute, how they are undertaken and their core values, and in ways that would not have been realisable without those experiences. Moreover, where the focus is on developing occupational-specific capacities, the experiences were often reported as providing opportunities for engaging in activities and interactions in practice settings through which students develop further the understandings and procedural competence required to perform effectively in their work. That is, through engaging with these occupational practices they came to understand what the occupation meant in practice and what kind of capacities are required to be effective within it. Importantly, through exposure to these experiences it was the students themselves who came to these conclusions, rather than having to do so through being told or taught.

It was also found that different kinds and variations of these work-related experiences led to distinct learning outcomes (i.e. the Tourism project). In that project, students had the option of engaging in three different kinds of educational experiences which, by degree, engaged them in different combinations of activities in tourism workplaces and the educational institution. It was evident that different kinds of outcomes for tourism students arose from these diverse kinds of experiences. In many instances, students' access to authentic experiences has to be organised by the institution. So, students' experiences were shaped by what was afforded by their educational program. Yet, in other programs, students have to organise their practicums themselves and manage their learning based on what they can organise (Midwifery and Music projects). For instance in the contemporary music project, students habitually sourced their own placements, which extended to organising musical performances. In some instances, their engagement has to be carefully supervised and monitored in the work setting, and in others, the students have to be largely self-directed, independent and act agentically to secure and engage in practicum experiences, which leads them to processes required to find employment in this sector. Then, there are other situations, where students are either engaged in paid employment related to their studies, which was the case in a business project (Business 2 project), or where their paid part-time work may or

may not be linked to the occupations that they are studying. The point here is that students' practicums will afford quite different kinds of experiences and students themselves are positioned in quite different ways within the workplace experiences (Bailey et al. 2004).

Yet, and importantly, regardless of their different and distinct contributions, practicum experiences such as those above can benefit from being, and will often need to be, enhanced by their teachers and through pedagogic means. Some of the reasons for this enhancement are that these experiences can be mixed, incomplete, inappropriate, or lead to ineffective (i.e. inappropriate and incomplete) learning outcomes, and therefore require guidance and collaboration to learn effectively from them (Diakidoy and Kendeou 2001). As noted, it is not necessary or helpful for students to engage in wholly independent learning, because they need to engage interdependently. That is, learning from others and through what they observe and can sense in their work settings (Forsman et al. 2014; Smith et al. 2015). Moreover, much of what they need to learn is already known and being practiced. Hence, engaging with others and learning interdependently are important means of their initial occupational preparation, and also the ongoing development of those capacities across work life. So, the incidence engaging with expert partners is important as these engagements can provide access to the knowledge required for effective work activities, and possibly extend students' zone of potential development. In addition, engaging with peers can make explicit and open to elaboration the concepts and procedures that are nascent for these learners. Moreover, these experiences are very difficult for those teaching or managing courses in educational institutions to effectively control. This is because they cannot be pre-specified or predetermined. So, pedagogic means might be introduced as part of the practicum experience activities which are intentionally directed towards enriching students' learning. Across the projects, a number of such pedagogic strategies were trialled and evaluated. These included the use of case-based discussion groups, such as occurred in the journalism project. Then there was also the provision of student-led seminars across the semester focussing on the work medical students were undertaking (Medical Education project). This process provided insights to others about that form of work and a means of refreshing their own experiences of that work in area of medical practice. Then, there was the provision of specific strategies such as engaging students in reflective learning logs focusing critically on those activities and the provision of weekly meetings to integrate the two sets of experiences as occurred in the business management course (Business 1 project). So these kinds of pedagogic practices are helpful for utilising more fully the learning arising from work experiences, and then quite explicitly linking them to what the student should be learning in higher education programs (Bailey et al. 2004).

It follows, therefore, wherever possible, students might also be encouraged, or it might be organised for them, to engage with more experienced workers during their practicum experiences. As noted, there are a series of benefits from such an engagement and these may need to be understood by students for them to be motivated and directed in their workplace engagements (Edwards 2005). Such direct engagement can provide access to experts who can explain concepts and processes

and demonstrate procedures effectively. However, these experiences are not always available, as was found to be the case in busy hospital wards for medical students. Contributions of workplace practitioners (e.g. nurses, engineers, classroom teachers, doctors) are likely to have a particularly powerful influence on student learning during lengthy practicums, and particularly where performance is not only public, but very necessary to achieve satisfactory outcomes, as was found in both teacher education project (Teacher Education 1 and 2 projects). So, when students engage in extensive periods of practicums, those who they engage with (e.g. more experienced practitioners) can become influential for their learning (Billett and Sweet 2015). Consequently, consideration needs to be given to the ways that this influence might be shaped or organised to meet the required educational goals.

In these circumstances, students might need to identify and seek out such experts and engage with them either directly or indirectly as they undertake their work. In addition, when students are uncertain or unsure about how to proceed, it might be helpful for them to be advised to secure a nominated workplace expert from whom they can seek advice and guidance, as was the case in a project which is preparing indigenous teacher aides to be classroom teachers. Yet, the quality of guidance and feedback will differ in terms of content and style, as again was discovered in the medical education project. So, it is likely for teachers in higher education institutions to provide access or even set up processes of peer support within the workplace setting, or with other students, as well as opportunities for discussing and sharing when students return to their university (Orrell 2011).

The willingness of students to be agentic learners, that is, to 'participate in, negotiate and learn' and to engage with the opportunities offered to them will be central to how and what they learn through their participation in workplace settings (Smith 2005). The more motivated, directed and intentional the students' engagement, the more likely the learning outcomes will be richer, because the constructive process is stronger (Malle et al. 2001). This intentionality refers specifically to students' personal epistemologies and how agentically they are exercised by students. However, in terms of pedagogic practice, it may be necessary to advise, prepare, support and prompt students to be active learners so that during their practicum experiences they can maximise their opportunities for learning (Cartmel 2011; Newton et al. 2011). For instance, in the Street Law project, it was the law students' capacities to be active listeners – being aware of the need to engage and understand others' perspectives – that was a key skill they needed to develop for both their learning processes and also for their professional activities (Law project). As noted, across the projects, it was frequently mentioned that it was the immediacy of concerns that directed students' full engagement. That is, students are most likely to be engaged in activities that they view as offering them capacities to address immediate concerns, such as impending requirements for effective practice (Molloy and Keating 2011). Consequently, reminding students about the importance of engaging during their practicum experience can be essential for their fulsome engagement and, potentially, rich learning. This reminding might also extend to longer term strategic goals, and purposes for which their engagement and learning in practice settings are directed. As they are negotiating with new physical and social

environments, engagging in tasks they have never done before, and interacting with individuals who are unfamiliar (Smith 2004), it is easy to lose sight of the purposes for which these engagements are being provided. In all of this, student awareness of the learning potential of their practice-based experiences, such as the value of practice to develop, refine and hone procedures, and to develop richly interlinked conceptual bases and come to engage actively during those experiences, will likely be helpful and motivating.

However, students may also be aware of the importance of organising and providing supportive experiences during their practicums. In an earlier study, nursing students reported that busy hospital wards were lonely environments for them. Consequently, weekly discussion groups were organised at the hospital and facilitated by a member of the teaching staff (Newton 2011). However, over time, the students not only came to appreciate the worth of these meetings, but also developed the capacities to engage with them independently. Hence, when the teaching staff withdrew support for these meetings, the students continued to organise and enact them on their own bases. The students seemed to need some initial support and guidance to establish peer groups, and then progressed with their own form of pedagogic support during their clinical placements. Yet, as foreshadowed, in another study, such prompting was not required. Medical students formed small support groups that met continuously and were helpful in sharing learning experiences, working jointly ahead of examinations, to reintegrate members who had undertaken placements remotely from the city in which the course was offered, and also as a form of support when students had difficult experiences in both the coursework and clinical aspects of the preparation (Richards et al. 2013). The important point here is that these educational experiences were intentional and potentially powerful and yet, ultimately, their prospect for being realised resides within how students engage with them. This requirement is likely to be a product of circumstance – availability of students, availability or ease of access to their teachers, for instance. Yet, teachers can do much to establish and support such activities during students' time in their practice experiences.

In these ways, providing supportive experiences during the students' engagement in practice settings will assist in making their practice-based experience more effective. From the findings across the 20 projects comprising the second fellowship, it is apparent that the effective integration during practice-based experiences was better supported if there was:

- Direct guidance by more experienced practitioners (i.e. proximal guidance);
- Sequencing and combinations of activities (i.e. 'learning curriculum', practice-based curriculum);
- Active engagement in pedagogically rich work activities or interactions (e.g. handovers);
- Effective peer interactions (i.e. students' collaborative learning); and
- Active and purposeful engagement by the students as learners in workplace settings.

## 8.5 After Experiences in Practice Settings

More than providing practice-based experiences for students, as noted, there is a need to enrich and augment these experiences after their completion. This augmentation includes finding ways of assisting students to understand, reconcile and engage in processes that variously reinforce, hone, extend or reshape what they have experienced and learnt through those experiences (Bailey et al. 2004). So, the most opportune time to engage in assisting students achieve these outcomes is after they have had some practice-based experiences, albeit through group or individual processes organised by teachers. This allows them to use their experiences as platforms to appraise what they have learnt, and also engage with others to share experiences and learn through and from each other's experiences. Essentially, those experiences provide a range of insights, perspectives and appraisals of the occupation in action which stand as a potentially potent educational resource. That resource is probably optimised when it is used through being articulated or practised through engagement with others thereby contributing collectively through processes that permit comparisons, contrasts and contextualisation. These processes, rehearse, articulation and appraisal are the very kind that are generative of rich learning (Vosniadou et al. 2002; Voss 1987). There is already long-standing recognition of the importance of having these kinds of opportunities within higher education programs that include workplace experiences. One of the few documented approaches that seek to actively reconcile students' learning experiences is that which is used quite widely within the cooperative education movement in the United States and are referred to as co-op seminars (Grubb and Badway 1998; Smollins 1999). These occur after students have completed their internships or placements and returned to their education institutions. In this particular approach, students are brought together to share and discuss their experiences, to enrich these experiences through the guidance of teachers, on the basis of concerns that what they learnt should not be restricted to the setting in which it had occurred. These activities often lead to what is referred to as 'teachable moments' (Bailey et al. 2004). This section focuses on how pedagogic practices can support students to appraise and reconcile what they have learnt through their workplace experiences.

Through post-practicum processes, at least four educational purposes can likely be achieved: (i) the development of understanding and procedural capacities; (ii) identifying what comprises robust knowledge, (iii) reconciling students' experiences; and (iv) using post practicum experiences for transformational learning experiences.

First, these post-practicum interventions can be used to assess the development of understanding and procedural capacities (Bailey et al. 2004). This is achieved through making explicit links between students' experiences and the learning and development that has arisen through them including their ability to extend what they have learnt to other circumstances. This purpose requires a reconciliation of experiences students have had and an explicit focus on their broader application, such as the canonical knowledge required to practice their preferred occupation.

Added here, is the understanding that while there are canonical concepts, practices and practices, that what works in one situation may be quite ineffective in another. So, having understandings about what practices are broadly applicable, and variations of those practices and how they are aligned with different kinds of workplace needs, might be very important for students, particularly when they seek a smooth transition to work after graduation.

Secondly, identifying what comprises robust knowledge. To enrich this kind of students' learning, the sharing of experiences and use of processes that seek to identify what is common and distinct about what the students have experienced, can help develop robust (i.e. broadly adaptable) occupational knowledge in the students. This point seems to be particularly important because coming to share and understand how the occupational practice is enacted across a range of settings from other students provides a strong basis for adaptability. That is, in coming to understand that there are different ways of progressing, for particular purposes, and that the range of factors that shape decision-making and responses are often shaped by a whole set of situated or local factors (Goldman 2003; Greeno 1989). These kinds of understandings and coming to know something of the range of occupational applications or enactments are particularly helpful when students graduate and secure employment, because they open something of the range of understandings, practices and values that are effective in particular situations. Hence, if their expectations and understandings about the occupational practice are only those arising through students' own direct experience which can be not fully realise the benefits that can be provided by accessing a wider range of instances of practice and others' perspectives of those experiences (Brown and Palinscar 1989). Therefore, engaging effectively with other students' experiences brings the potential of enriching what the students know, can do and value, in ways that are essentially not able to be achieved through their own experiences. Hence, both for effective educational purposes and also to utilise as fully as possible students' experiences in practice settings, it is important that their experiences be shared, compared and analysed in an active way. Most likely, it will be teacherly processes that can best realise these processes effectively and direct those processes in student outcomes towards what is intended to be achieved in their courses (Rogoff 1995).

Thirdly, in reconciling their experiences, students are likely to have had different kinds and qualities of experience in the workplace settings. Therefore, the opportunity for the sharing of experiences is helpful for some students to reconcile the problems they faced may not be unique to them. From engaging with others whose experiences were different, they can come to understand more about the complexity of work and workplace requirements, and what kind of experiences can arise. For instance, in the journalism project, students had very different kinds of experiences in the same workplace, which led some to question their own competence. However, through sharing of experiences it was found that there were workplace factors associated with gender that shaped the distribution of activities and interactions in which the students were invited to participate. Consequently, bringing students together and having means by which they can share and critically appraise their experiences and outcomes, and then link them to their educational program can be

very potent interventions (Chiropractic project) (Cartmel 2011; Newton 2011). All of this is important educationally, and is unlikely to be achieved unless particular kinds of interventions are organised so that students have the opportunity to come together, share and appraise in ways which are productive, and not unhelpfully confronting.

Fourthly, these post-practicum experiences can be used for transformational learning. That is, as a device to explicitly engage students in reflecting upon, extending and transforming what they currently know, and in productive ways. In particular, these interventions can manage this process in ways which are productive rather than paralysing or potentially negative. Productive outcomes were evident in the chiropractic and legal projects, as mentioned above. Importantly, in both of these instances there was much that was student-initiated. Yet, it was teacher-led processes that allowed important aspects of the occupational practice to be appraised and discussed, and understandings about it enriched, and in ways which were productive and managed to avoid potentially negative outcomes and unhelpfully confronting experiences. In particular, it would seem that to best align the experiences of students both collectively and individually with the intended outcomes of their course, that some kind of intervention by teachers who have a clear understanding about what they are trying to achieve is likely to be a really useful investment of the teachers' time as well is that of the students at this point.

Therefore, pedagogic practices such as post-practicum student forums or discussion groups can be used to share experiences and assist students benefit from their experiences and those of others. This can include those experiences that might be otherwise seen as being negative, as was the case in the journalism project. Certainly, across a range of the projects, post-practicum initiated and engaged processes emerged as being effective, welcomed and desirable by students and also their teachers. At one level, they enabled students to locate their experiences and learning into a broader context of learning about the occupation. They also offered a means to explicitly connect the kinds of experiences students were having with the propositions being provided through the classroom and text-based elements of their programs. On another and practical level, they enabled students to learn something about that particular placement that they had not been able to experience personally. This was the case in a number of projects, including the journalism, chiropractic, media and educational projects. At yet another level, these kinds of activities were reported as promoting richer learning. Requiring students to deliberate on their experiences, and to detail them in a written form, as was the case in the music education project, or articulate them to others, as was the case in the chiropractic project, the intervention provided the students with an experience through which a richer understanding of the field could be obtained. As noted, these experiences also provided a platform to engage, yet also to manage, the extent of transformative learning that arose, which probably would not have otherwise occurred. Discussion groups were also shown to be an effective way of connecting the diversity of experiences a student had encountered. The reflective session used in the chiropractic project was described as "a structured post-placement seminar, … engaging students in listening, debate and personal reflection" –

was found to "extend and transform their understanding of chiropractic practice, and promote conceptual, procedural and dispositional development" (Chiropractic project). Similar findings arose in the project involving law students teaching street law to schoolchildren (Law project).

This kind of engagement also acknowledges the person-dependent nature of learning and that the sharing of those personal perspectives and developments can lead to greater shared understanding (i.e. inter-subjectivity). As workplace experiences are of different kinds, and have been shown to lead to distinct kinds of learning, it is important to have the opportunity to share these experiences so that other students can benefit from the experiences of peers and promote commonly applicable understandings, procedures that are well-directed and values that are aligned with those required for the effective exercise of the students' targeted occupation. Because students' personal backgrounds and histories are so different, and may be quite remote from the circumstances in which they have practised, they may need to reconcile their experiences for them to become educationally worthwhile. The variability of experience is enhanced by the duality that comprises such experiencing. On the one hand, there are different kinds of experiences provided for students across placements and, then, how students construe and engage in what is provided, occurs in different ways, as was identified in the case of journalism, public relations and law education.

Different and personally-distinct understandings may arise from these experiences, without guidance and facilitation of more experienced partners (e.g. teachers, workplace supervisors, more experienced students) which are inevitable. So, concerns about the development of what constitutes, for instance, canonical occupational knowledge and what students are needing to know, do and value to secure that knowledge likely need some teacherly interventions, as they might not be resolved through discovery alone. More than being just about individual perspectives, those interventions can be about assisting learners with different strengths, capacities and prior experiences (Billett and Ovens 2007). For instance, low-achieving students may be disadvantaged (e.g. denied access to, and not effectively engaging, in practice-based experiences, which were reserved for high-performing students). Although second best, in situations where there is restricted access to particular kinds of work experiences providing opportunities for these experiences to be made available, albeit vicariously, can potentially be enriching. Another key purpose for sharing and drawing out students' experiences in workplace settings is that often these experiences are not benign or supportive. Consequently, it might be necessary for teachers to deploy particular pedagogic practices to assist students reconcile and make more positive and constructive what they have experienced, which otherwise might be confusing, or negative because it is beyond the scope of their zone of potential development. As students processes of experiencing cannot be pre-specified or predicted, it is important for there to be teacherly opportunities to overcome negative experiences and inappropriate learning. So, even though factors which lead to negative or unhelpful practice-based experiences are out of the control of teachers (Journalism and Public Relations projects), a guided post-practicum process can help students appraise those experiences in ways that result in their

having a positive educational impact, which was evident in the journalism and law projects. In addition, as noted, workplaces are not able to provide the full range of experiences or affective experiences. Therefore, it may be necessary to enhance and enrich those experiences through sharing and discussing what other students have encountered.

In sum, having teacherly interventions that permit students to share, compare and contrast their experiences is important educationally. Being selective about the kinds of activities required to maximise these processes and their outcomes, is likely to be helpful in assisting students move smoothly into practice, and exercise the kinds of capacities required to sustain their work and learning in their selected occupational practice. Before concluding this section, it is probably worth considering what has occurred within the co-op seminars in North America as these provide a helpful instance of the ways in which workplace experiences can be engaged with, and learning from them integrated into the overall program.

### *8.5.1 Co-op Seminars: Purposes and Practices: A Case Study*

The North American model of cooperative education (or co-op) is a well-established approach to make links between learning that occurs in workplace settings and in tertiary courses. The use of this model is widespread across North America. It has its origins early in the twentieth century in Cincinnati in an engineering faculty where there was concern that what students were learning in their courses was remote from what was needed to practice engineering (Smollins 1999). A key device still used extensively in these programs is the 'co-op seminar', which is often compulsory. This seminar was devised to occur at the end of the students' workplace placement to provide an opportunity for maximising the learning from those placements, to share them with other students and to make explicit links to the course in which the students were enrolled. The co-op seminars were aimed "to transform what might have been otherwise just experience of employment into rich educational experiences" (Grubb and Badway 1998). In their review of co-op seminars at LaGuardia Community College in New York City, Grubb and Badway (1998) advised of eight educational goals for these seminars. These goals are to:

1. Gain meaning from the day-to-day occurrences of the internship;
2. Broaden understanding of theoretical concepts as they apply to real-world situations;
3. Gain insights into the relationship of the self to work and to the larger society;
4. Understand personal values and strengthen awareness and appreciation of difference;
5. Understand the steps required in career decision-making for occupational mobility and lifelong learning
6. Develop personal and professional skills and strategies necessary for success in the next stage of life;

7. Enhance a broad array of skills for success in the workplace; and
8. Encourage contributions to the community and become responsible citizens of a multicultural society.

As can be seen above, some of these goals are about securing occupational specific outcomes, some about the world of work, and others about broadly applicable learning, such as responsible citizenship. These goals can be directed towards different educational purposes: (i) career exploration and decision-making; (ii) work life preparation; (iii) preparation for specific occupations; and (iv) preparation for specific workplace needs. Hence, these seminars can serve purposes which are very consistent with current interest in providing students with experiences to utilise and integrate what they have learnt in their work placements. It was noted that in relatively recent manifestations of these activities, LaGuardia students are required attend a series of co-op seminars that address general issues about work, occupations in general, and the competencies required on the job. These seminars were judged as being successful in linking education and work-based learning, through providing activities that connected these two sites of learning (Grubb and Badway 1998).

As noted, these seminars were principally intended for students to critically analyse and appraise their workplace experiences, which were seen as field laboratories. Strategies such as systematic observation, identifying critical incidents, interviews, and document reviews were used by students to gather data about these experiences. A variety of classroom activities are used in the co-op seminars. These include students working in teams to identify particular issues; use of case studies to evaluate experiences and responses; brainstorming questions; simulated production exercises; and the use of field assignments to reflect on particular kinds of experiences. These activities are used to appraise the application of theoretical concepts such as actual practice; identify the ways that key practices (e.g. teamwork; physical clues) were enacted. Grubb and Badway (1998) report that, initially, these seminars were quite unstructured, but students complained about the lack of structure and not being able to perceive the benefits of these arrangements. They were often scheduled in the evening or on the weekend to avoid interfering with the students' working week.

The focus on these seminars stands to emphasise the importance of organising experiences for students to appraise and actively align what they have learnt through the practice settings to the goals of the programs. Having had these experiences, and learnt from them, students are thereby informed and can engage in such encounters in constructive ways. In sum, the findings of many of the projects that focused on students' experiences were that, after practice-based experiences, it is helpful to:

- Facilitate the sharing and drawing out of students' experiences (ie an opportunity for articulating and comparing the commonalities and distinctiveness that leads to understanding the canonical and situational requirements for practice);
- Explicitly make links to, and reconciliations between, what is taught (learnt) in the academy, and what is experienced in practice settings;

- Emphasise the agentic and selective qualities of students' learning through practice (i.e. personal epistemologies); and
- Generate in students critical perspectives on work and learning processes.

## 8.6 Pedagogic Practices Serving to Assist the Integration of Workplace Experiences

Just as it is important to expand on notions of curriculum when considering learning experiences across university and practice settings, It has been proposed in this chapter that it is also helpful to view pedagogic concerns as being central to this education project. Pedagogies here are seen as the means by which students' experiences can be augmented and extended through engagement with other people in the form of students and teachers, as well is processes which can either be teacher led or organised by students themselves. The principal point is that on their own, workplace experiences, however well-organised and ordered, will be insufficient to develop much of the knowledge which is required for students to develop the kind of capacities that will lead them to make smooth transitions to employment upon graduation and, in prospect, hopefully develop the kind of capacities they need to continue to learn across their working lives. Elaborated more broadly here, pedagogies are seen as means to support and promote student learning within and across both kinds of settings. Pedagogy is cast here in particular ways in both settings: one designed for, and enacted within, settings where student learning is held to be the central concern; and one in which the imperatives of practice are central. So, it is evident that pedagogic practices which have the capacity to inform and prepare students for the practicum experiences, and to engage with them during those experiences and then assist reflection after them, are likely to be useful. In particular, it has been found that approaches such as learning circles (Cartmel 2011), the linking of 'follow-through experiences'(Sweet and Glover 2011), co-op seminars (Grubb and Badway 1998), using logs, and learning groups (Newton 2011), all comprise pedagogic practices that can assist maximise and effectively manage the continuity of learning experiences across the different settings and can promote effective learning about practice as well as utilising and developing student agency. Yet, both of these views of pedagogy are concerned about the provision of experiences for students and their engagement with them. They each have a range of potentialities, not the least to be effectively integrated and complementary. It is these kinds of pedagogic practices that stand to provide support for students' negotiation of experiences across both practice and university settings.

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# Chapter 9
# Developing Students' Personal Epistemologies

## 9.1 Personal Epistemologies, Readiness and Learning

Higher education students' personal epistemologies are central to their learning in both education and practice settings. These epistemologies comprise what they know, can do and value and as such are the foundations for how they engage with what they experience and learn in both settings (Billett 2009b). In terms of intentional learning of the kind promoted by educational programs (Vosniadou et al. 2002; Voss 1987), a helpful concept to understand learners' personal epistemologies is to consider their readiness to learn, in terms of their conceptual, procedural and dispositional capacities to engage with and learn from what they experience. That is, the degrees and kinds of students' readiness comprise their capacities to effectively engage in activities and interactions in educational and workplace settings. If this readiness is absent, students may not be able to learn effectively for what is required both during their course and then after their graduation. This readiness also constitutes each individual's zone of potential development. That is, the extent and scope of the learning they can achieve without the need of assistance. In this way, whilst different kinds of learning will arise through students' engagement in activities, students' level of readiness can be a predictor of the ways in which students can engage and, therefore, learn through their activities, albeit in the educational institution or workplace. This was evident in feedback from the 25 projects that comprised the two teaching fellowships. For instance, 80 % of engineering students reported that their work experience as providing relevant experiences that contributed to their university studies and 93 % reported these experiences being important for their professional preparation (Engineering 1 project). Through engaging in authentic work activities, both the students sense of agency and responsibility were reported to be enhanced (Commerce and Allied Theatre projects), which emphasises the dispositional kinds of readiness that are important to effectively participate in and learn through work activities. Medical students reported that from their clinical experiences of gaining an awareness of



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their need to understand what the student role is and how they can maximise their learning, becoming agentic as learners (Medical Education project).

More specifically, students reported practice-based experiences directly contributed to their learning and engagement in educational programs by building motivation that energised their studies (Commerce project), enabling them to learn more about their levels of personal development or confidence, and assisted their ability to develop clearer career goals and purposes for their studies (Journalism project); hence, the importance of interest (Tobias 1994) or learner intentionality (Bruner 2001). These experiences were also reported as providing insights and opportunities for developing a range of employability capacities required to engage in their selected occupation (Music project). Hence, the contributions here comprise those associated with conceptual, procedural and dispositional readiness. That is, what these students came to know, can do and value shapes how subsequently they come to engage in educational and work settings. This is why students require practice-based experiences, because those in educational settings alone will not make them ready to practice their selected occupations. Ultimately, this readiness positions students in zones of potential development, as Vygotsky proposes (Valsiner 2000), which supports their learning and potential to apply that knowledge in practice. Hence, more than a consideration of the popular concept of the Zone of Proximal Development – the extent of learning that a learner can secure through engaging in joint-problem-solving with a more informed partner – the kinds of learning and development being referred to here are also about the learners' abilities to extend what they know, can do and value through their own efforts when assisted by others. It is these issues that are considered in this chapter in terms of personal epistemologies, learner readiness and the promotion of individuals' personal epistemologies through teacherly actions.

The findings of both fellowships (Billett 2009a, 2011) emphasised the importance of students adopting an active, focused and effortful (i.e. agentic) approach to their learning both in educational and practice settings. This agency extended to when they engaged in reconciling their experiences with other students and to the goals of their studies. Essentially, students' engagement in, and critical considerations of their practicum experiences and reconciliation of them is how their integration can best proceed (Billett 2014). It is students, not their teachers, who engage in these experiences, particularly in the practicum-based ones that occur in the absence of teachers and teaching. It is also the students who have to integrate what they experience in practice settings with their programs of study. Hence, the kinds of learning that arise from these experiences are largely premised upon students' active and critical engagement with activities and interactions in both settings and their active attempts to reconcile these experiences.

All of this was evident in a range of ways across the 25 projects that comprised the fellowships, whose findings point to the centrality of students' personal epistemologies and suggest that, alone, considerations of educational experiences premised on curriculum and pedagogy are incomplete. In addition, students' personal epistemologies need to be brought to the forefront. For instance, it was found across the projects that students' agency is variable, which shapes

the effectiveness of their engagement with practicum experiences (e.g. Creative Arts, Music, Public Relations projects). Many students, such as those from the music project, were capable (and willing) to initiate related work activities for experiential learning purposes. Yet, students' diverse personal histories equip them in different ways to participate in workplace settings (e.g. Social Work project) including, their familiarity with the work they intend to engage in which shapes their readiness to understand the course content, but also to engage effectively in practicum experiences. So, the kinds of understandings, language competence and local knowledge required of social workers were perceived to be absent in international students who had enrolled in a post-graduate social work program, for instance. Elsewhere, students reported that the practicum experiences had provided informed insights about the occupation they were seeking to enter, and also what they need to do to make that entry effective (Creative Arts project), which they may not have found in other ways. More generally, pedagogic strategies that drew upon what students' know, such as their existing experience of work, differed widely amongst those that are currently employed full-time (Business 2 project) or in the case of the vast majority of students who are engaged in paid part-time work of different kinds, and with that employment often not directly related to their studies (i.e. Business 1, Engineering 1 and Music projects). Indeed, undergraduate students were found to be less likely to be familiar with the kinds of workplaces that they would come to practice in than their postgraduate counterparts (i.e. Engineering 1 project), whom were often employed in those workplaces. Even then, experiences in practice settings are individual, and students' learning from them is likely to be derived in personally-distinct ways (e.g. Tourism project).

Yet beyond the kinds of readiness that are a product of earlier experiences, were evident the kinds of learner intentionalities (Bruner 2001; Malle et al. 2001) that shaped how students directed their efforts and agency. For instance, the immediacy of concerns was a central imperative driving students' engagement and agency. Students were found to most likely to engage effortfully in activities that they viewed as responding to immediate concerns and interests, such as concerns about their capacities to practice effectively (e.g. Physiotherapy, Teacher Education 1 and 2, Allied Health project). When students focussed on coping or being successful in immediate performance-related activities these were reported as being engaged with very consciously and effortfully (e.g. Allied Health, Teacher Education 1 and 2 projects). For instance, as Molloy and Keating (2011) noted that in a workshop preparing physiotherapy students for their practicums, these students were quite uninterested in learning about theories of adult learning applicable to workplace settings. However, they were very interested in and focused in understanding how they would be assessed in their up-coming practicums and developing capacities that would allow them to practice effectively. How they would engage with and place their hands upon their patients and whether what they did would meet the approval of their placement supervisors were foremost in their concerns. Theories of adult learning were less engaging and a low priority for them.

So, their interest and personal agency, albeit founded in particular ways arising from individuals' personal histories and epistemologies (Baldwin 1894; Brownlee

and Berthelsen 2006), were directed much more towards some goals than others. How they 'participate in, negotiate and learn,' and engage with opportunities offered to them, albeit in distinct ways (i.e. Public Relations and Journalism projects), and the exercise of their personal epistemologies (e.g. active listening) were central to how the participated and learned through their workplace experiences, and linking those experiences to what they needed to know to practice as novice practitioners (Smith 2005). Given all of this, it may be useful to press students to consider their personal histories and how these may be helpful in assisting map student transition to new occupational identity and roles (i.e. how they came to this, where they had been before) (Communications project).

### *9.1.1 Personal Epistemologies: Learning Through and the Integration of Experiences*

Given the centrality of their role in engaging with and reconciling what they experience, this concluding chapter elaborates the concept and role of personal epistemologies as they are developed and exercised through experiences in both educational and practice settings. It focuses on the important role these epistemologies play in university students' learning in both of these settings, and importantly, when reconciling experiences in developing their occupational capacities. The development of these epistemologies is in itself an important educational goal, which extends to students' readiness to engage in learning. Not only are they central to the initial learning of occupational practice, but they also need to be exercised by practitioners across their working lives, as they come to engage with changing work requirements and ways of working. Indeed, these personal attributes and capacities shape their ongoing learning (Billett 2009b), including the degree by which the further development of their occupational knowledge is exercised. As discussed in Chap. 2, all of this is directed towards individuals' sense of vocation, and them assenting to making their selected occupation their key vocation (Dawson 2005; Hansen 1994). In advancing this account of the qualities, purposes, and character of these epistemologies, this elaboration first draws upon explanatory propositions from psychology, sociology, and philosophy, and from empirical accounts of work.

One aim here is to go beyond conceptions of epistemological beliefs (Brownlee and Berthelsen 2006; Hofer and Pintrich 1997) to include procedural (i.e. what individuals can do), conceptual (i.e. they understand) and dispositional (i.e. value and believe) and to position personal epistemologies as being active, intentional, and derived in person-particular ways across individuals' life histories. Indeed, the explanatory goal here is to understand how these epistemologies are exercised in and developed through students' engagement with their higher education studies. This necessarily includes workplace experiences and accounting for the inter-psychological processes (i.e. those between the person and the world beyond them) that comprise individuals' processes of engaging in activities and interactions in both settings, and then reconciling what they have experienced and learnt from each

setting, as directed towards meeting the expectations of both kinds of settings and developing occupational capacities (Eames and Coll 2010).

Collectively, individuals' personal epistemologies are necessary to secure the continuity and remaking of society (Donald 1991; Valsiner 1998), as well as individuals' development and their vocation. That is, they are exercised in ways which continually remake the activities we engage in when responding to particular problems at particular points in time, and also, as circumstances demand, enact transformations within the occupational practice (Billett et al. 2005). Consequently, both personal and cultural changes can be understood through the quality and exercise of individuals' epistemological actions. These personal epistemologies are defined as individuals' ways of knowing and acting, arising from their capacities (i.e. what they know, can do and value), earlier experiences, and ongoing negotiations with the social and brute world (Billett 2009b) that together shape how they engage with and learn through work activities and reconcile their experiences. Hence, like inter-psychological processes more generally, these reciprocal processes occur in ways that are enacted individually, albeit in uniquely person-dependent ways. Nevertheless, this should not be seen as them being wholly individualised and highly-person based processes and outcomes. The experiences individuals have had across their lives shape their learning and development through their ongoing negotiation with what the social world suggests in terms of norms, practices and artefacts (Smith 2012). Consider the example above about students coming from countries without social welfare systems and social workers coming to engage in post-graduate studies to become social workers, compared to their domestic counterparts. In this way, each individual and their epistemologies are socially-shaped, but arise through particular combinations of their socially-derived experiences. Far earlier, Baldwin (1898) proposed individuals' internalisation of the social experience as generative of autonomy, with this autonomy itself being socially-constituted. He claimed that the social geneses of the self cannot be viewed as the mere internalisation of the social experiences, but as a personal-psychological phenomenon. Accordingly, he proposed that:

> ... the developing person comes more and more to reflect the social judgement in his own systematic determination of knowledge; and there arises within himself a criterion of a private sort which is in essential harmony with the social demand, because genetically considered it reflects it. The individual becomes a law unto himself, exercises his private judgement, fights his own battles for truth, shows the virtue of independence and the vice of obstinacy. But he has learnt to do it by the selective control of his social environment, and in this his judgement he has just a sense of his social outcome.(sic) (Baldwin 1898, pp. 19–20)

Therefore, these epistemologies shape how individuals identify as students and workers, how they construe and construct the activities and interactions they encounter, and in what ways they exercise their occupational capacities. Moreover, through their exercise, these epistemologies also act to refine, reinforce and transform individuals' paid work. The procedural concern here is to understand how both the goals for and processes of learning throughout working life are enacted, in different kinds of workplace circumstances.

It follows that both conceptual and procedural salience is to be found in elaborating the character and role of personal epistemologies, and how they are exercised in individuals' engagement with and reconciliation of experiences in education and work settings. These epistemologies assist in understanding the relations between the personal and the social contributions to learning that are now arising in many accounts of human development (Edwards 2005; Eteläpelto and Saarinen 2006; Hodkinson et al. 2008). Students' engagement in experiences spanning both workplaces and educational settings are helpful bases from which to elaborate a view of epistemologies as their goal-directed activities and negotiation between both individual (i.e., learning through and for work) and social processes and needs (i.e., the development of the working knowledge afforded by both the educational institution and workplaces). This emphasis also leads to the important educational goal of assisting individuals come to learn about acting agentically to secure the kinds of outcomes required for their initial occupation, but also, and perhaps as importantly, throughout their working lives.

In elaborating these propositions, the chapter first discusses further individuals' role in the construction of knowledge. Then, it outlines what constitutes personal epistemologies and how learning and changes arise through them. Then, consideration is given to how the development of these epistemologies can be generated through educational processes. It is these epistemologies that shape the micro-genetic development or moment-by-moment learning (Rogoff 1990) that comprises how individuals engage in everyday activities and interactions. This micro-genetic learning is ongoing as individuals construe, construct, and negotiate what they experience. Yet, no two individuals have exactly the same set of experiences (Valsiner 2000) and, thus, no two individuals are able to construe and construct knowledge on a moment-by-moment basis in exactly the same way (Billett 2003), even if they wanted to. So, beyond the learning arising from experiences being in some ways personally-shaped, all of this emphasises the central role played by individuals' personal epistemologies in students' learning and the need for them to be engaged actively in the processes of meaning-making. Hence, beyond considerations of curriculum and pedagogy and as foreshadowed, personal epistemologies need to be accounted for in considerations of educational provisions, such as those that are the focus of this book.

## 9.2 An Account of Personal Epistemology

The conception of personal epistemologies is, therefore, used to capture the attributes that shape this active and directed process of meaning-making and learning. This conception aims to go beyond what others have referred to as epistemological beliefs (Hofer and Pintrich 1997) and proposes a more comprehensive and agentic conception of individuals' epistemologies. Epistemological beliefs are proposed as approaches to the practice of learning comprising individuals' views about what knowledge is, how knowledge is gained, and the degree of certainty

with which knowledge can be held (Brownlee and Berthelsen 2006). Here, a more comprehensive account of personal epistemologies is advanced, with them being seen as including how individuals' ways of knowing and acting arise from their capacities, earlier experiences, and negotiations with the social and brute world across their life histories (Billett 2009b). This conception accommodates the negotiated and personal process of constructing these epistemologies, in contrast to the view of epistemologies as having a given quality premised on particular social positioning (e.g. Belenky et al. 1986), although such factors accommodate how social forms and norms contribute to these epistemologies, as Kelly (1955) advises. It extends to how individuals go about achieving goals, not just the formation of those goals and beliefs.

So, given these conceptual emphases, it is necessary to make some explicit qualifications about the concept of personal epistemologies being advanced here. This epistemology is not the kind of overly mentalized conception as found within some cognitive theorising. Nor is it positioned as being distinct from or antagonistic to the social world, as some believe that the use of such terms as individual or personal connotes (e.g., Ratner 2000). Instead, it is a socially-grounded concept, in so far as it represents the intra-psychological outcome of a lifetime of person-particular processes of construing, constructing, and practicing and, as a consequence, learning through encounters with the social and brute world. For instance, despite the role of the subjective, there is much that is epistemologically objective in this account. As Searle (1995) states that "it isn't just my opinion or evaluation that it is a screwdriver. It is a matter of objectively ascertainable fact that it is a screwdriver" (p. 10), thereby being respectful of the world as it is, as Kelly (1955) suggests. Hence, this conception of personal epistemologies is not an 'anything goes' form of relativism. Instead, it suggests that personal epistemologies arise ontogenetically through the press and mediation of the social experiences, and individuals' engagement with and taking up of those forms. So, whilst being individually or personally dependent, they are not idiosyncratic to the degree by which they cannot and do not relate to what others experience, come to know and practice.

Procedurally, as noted, there is a focus on securing goals here. So, elaborating the character and role of personal epistemologies and their subjective underpinnings is central to understanding how individuals engage in such goal-directed activities as their studies, paid work, how they learn through those experiences, and how they go on to remake their work activities as they practice them (Donald 1991; Smith and Billett 2006). In this way, personal epistemologies can also assist understanding how best the considerations of curriculum and pedagogy outlined in the previous two chapters might be conceived and enacted. For instance, as noted in Chap. 7 (i.e. Curriculum Considerations: The Integration of Experiences) of the three conceptions of curriculum: the intended, enacted and experienced, in many ways it is the latter counts most, in terms of learning. That is, ultimately, beyond what is intended by those who organise and order learning experiences, the efforts, focuses and preferences of teachers who enact those experiences are how students come to engage with, experience and learn from what is afforded for them. Even the

most intricately considered and detailed syllabus document and lesson plan cannot guarantee that what is intended students learn is what they learn. Also, the most effortfully-organised experience for students cannot guarantee that they will engage with it and learn what was intended. Further, as noted in Chap. 8 (i.e. Pedagogic Practices Supporting the Integration of Experiences), although there are a range of pedagogic interventions that can be enacted before, during and after the students' workplace experiences, the quality of the learning process and outcomes created by these interventions is also dependent on how students elect to engage with them. So, more than what is afforded the students in terms of the sequencing of experiences and pedagogic interventions are how they come to engage with these affordances.

## 9.3 Time Jealous Students

For instance, as noted, a particular feature moderating student engagement was identified across the two fellowships: 'time jealousy'. That is, many and perhaps the majority of students in contemporary Australian universities appear to be carefully managing how they allocate their time and effort when engaging in higher education courses as they balance those commitments against those for paid work, family and social activities. Given that work experience or practicum requirements can often come on top of university activities that students already engage in, they may not always value them as much as other activities, particularly when they are perceived, not to be valued by the higher educational institution (e.g. carry no credit or are not assessed). So, rather than these students being 'time poor', they are jealously guarding their time. The point here is that how students direct their energies and intentionality is central to the quality of their learning (Bruner 2001). Superficial engagement likely leads to weak or superficial learning. Rich engagement likely leads to rich or robust learning. So, how students value, see as being worthwhile, or are motivated to engage with their practice-based experiences is likely to be quite central to how and what they learn. A colleague recently referred to a group of medical students who were pressed to undertake a short period of rural placements. Some of the students resented these placements because their personal goals were associated with becoming high-level medical specialists and they were not interested in working in either general practice or in regional hospitals. Hence, despite being provided with guidance, mentoring etc these students roundly rejected the experiences provided for them and engaged superficially and resentfully in those activities.

Therefore, having outlined the centrality of personal epistemologies in the processes of individuals experiencing, coming to know and learning and developing (and those of students are certainly no exception), it becomes important to consider how best educational experiences can develop those capacities to assist students be effective in the short term, during their study life, but also preparing them with capacities that will assist them to continue to learn across their working lives. These

considerations include the importance of readiness to engage and learn through practice and reconcile what they have learnt. Then, particular initiatives associated with promoting students' readiness and epistemological agency are proposed and discussed in conclusion.

## 9.4 Promoting the Development of Agentic Personal Epistemologies for Education and Professional Life

In this section, some considerations are advanced about how best to promote the development of agentic epistemologies within students. Although the initial focus is on how these can be developed and utilised to maximise their practice-based learning experiences, there is also a concern to prepare them for the kinds of capacities required to learn across their professional lives. To illustrate this concern, Molloy and Keating in their 2011 chapter entitled Targeted Preparation for Clinical Practice, commence with the following quote from a physiotherapy student;

> The key messages I'm getting from this week are to be proactive in my learning during clinicals in terms of critically reflecting and not leaving it to the supervisor to make times with me for feedback. To be professional and show interest in what I am doing, be punctual and be prepared with notes. To concentrate on the patient rather than the fact that I am being tested and to understand that I am not the priority- the patient is. To be socially aware of people, adapting to my supervisor's style of teaching .... (Molloy and Keating 2011)

What this quote from a physiotherapy student illustrates is the realisation by the student that it is their key role and responsibility not just to participate in practice-based experiences, but to utilise and optimise the qualities of those learning experiences for their own learning and development. Central to what the student suggests is a set of practices that students need to adopt: being prepared, proactive, to focus on the tasks being undertaken, not on themselves, and also that the kinds of preparation they had about the importance of their patient are in fact a central tenet of their practice. This quote is part of feedback at the end of a short program devised by Molloy and Keating (2011) to assist physiotherapy students be prepared and ready to engage in their practicum experiences. Their practicums are often quite long-term (up to 3 months) and students may find themselves in locations, physical and social circumstances that are quite different than those in which they have studied or have had clinical experience to date. Emphasised within this quote is the student being aware of the need to be ready for engaging in the practicum work and helping patients.

Indeed, what is suggested here is the importance of *readiness* for students to engage in these programs. Broadly, readiness is associated with what Vygotsky referred to as the zone of potential development (Valsiner 2000). That is, scope of learning that can be promoted by individuals' alone through their capacities, energies and agency (i.e. personal epistemologies) and that this can take them to the zone of nearest development. Then, some specific suggestions associated with what

might occur before students engage in practicums and then how those workplace-based experiences are able to promote their personal epistemologies are suggested.

### 9.4.1 Dimensions of Readiness

Readiness refers to individuals' ability to engage productively with and learn from what they experience. As such, it relates to what individuals know, can do and value. These capacities enable them to engage with new activities and interactions, such as those students might encounter in the workplace, or university setting. If students do not possess the knowledge required to engage effectively in their course work or practicum experiences the intended consequences of these educational experience is unlikely to be achieved. What might be intended as an opportunity to experience their occupations might be experienced as a stressful encounter that focuses their learning on quite different concerns, for instance deciding that they are not suited to that occupation. For instance, in an unrelated study, a young female medical student who aspired to become a surgeon was so confronted by aspects of that work and the behaviour of surgeons in one of her medical placements that she shifted her preference away to an entirely different specialisation (Cleland et al. 2014). As a young female from an overseas country, the experience she encountered appears to have either been overwhelming and led to a change in her preference for specialisation or that the original goals were ill-informed.

The question is whether if she had been assisted and supported more effectively in that experience, whether the outcome would have been quite different. The concern here goes beyond the student alone because she comes from a country which lacks qualified surgeons. Therefore, the readiness to productively engage with particular experiences is important for intentional learning experiences, such as those offered within education programs and clinical settings. For students engaging in work places, it might comprise making them aware of the purposes they are to achieve and develop the kinds of capacities or understandings that will allow them to do so. It was found in the fellowships, that students were unprepared for and had unrealistic expectations of their practicum experiences (Public Relations, Teacher Education 2 projects), which rendered them not ready for engagement in and learning effectively from those experiences. Also, the levels of readiness to engage in work-based experiences were found to be diverse due to differences in students' experience of work prior to their placements (Applied Theatre, Social work, Business 2 projects). Then, many lacked confidence in their ability for engaging in the occupational practice (Music and Commerce projects), thereby shaping their dispositional readiness. So, these students zone of potential development might need to be augmented or extended by proximal or close guidance by more experienced or expert others.

Certainly, readiness is long-standing concept associated with human learning and development. Perhaps most notably, this term was used in Piagetian theories of child development (Piaget 1976), where it was held that children's cognitive development

was premised upon movement through a series of developmental stages, premised on their maturation. That development went from children's thinking and acting relying upon sensory input, through to their ability to manipulate and utilise what they experience including engaging with abstract concepts that was not dependent upon having concrete examples or instances. In this theory, it was assumed that children's ability to engage in activities is limited to the stage of biological development that shaped their readiness to engage with what they experience. That is, if they were not ready to perform a task at their stage of development, it was beyond the bounds of their development to engage with such a task. Here, readiness was very much associated with cognitive abilities such as those required for using and manipulating knowledge.

Regardless of the veracity of this particular developmental theory, which, in fairness, never attempted to address issues of adult development, as the scope of its reach ended in adolescence, the concept of readiness is helpful to understand university students' abilities to learn from what they experience, in terms of what they know, can do and value. That is, whether individuals' personal epistemologies direct their efforts and energies towards meaning-making because they believe it to be worthwhile, and then whether they possess the understanding and procedural capacities to engage effectively in tasks and achieve desired outcomes.

## 9.5 Student Readiness: Conceptual, Procedural and Dispositional Dimensions

So, more than having the required level of conceptual understanding (i.e. as in Piaget's focus of cognitive development), readiness here extends to students having the capacities (i.e. procedural abilities) through which they will learn and also the disposition and interest to engage in those tasks. Hence, a way of considering the kinds of readiness needed by students to engage in, learn from and integrate those experiences is to consider them in terms of what workers in the form of work being learnt, know (i.e. conceptual), can do (i.e. procedural) and value (i.e. dispositions). In this way, there are parallels between the elements of personal epistemologies set out above and the kinds of readiness which support the exercise of that epistemology.

Conceptual knowledge refers to facts, concepts and propositions, which are of the kind of knowledge that people can state: they are declarative as noted earlier. You can talk about and write them down, and they tend to be the kind most focussed upon and assessed in educational programmes, for instance. This kind of knowledge is ordered into hierarchies with factual knowledge seen as being the lowest level through to links and associations amongst concepts (e.g. the range of factors associated with an individual's health) (Glaser 1989). Depth of conceptual knowledge (i.e. deep understanding) is associated with links and causal associations amongst concepts, not the quantum of knowledge individuals possess (i.e. ability

to memorise facts). So, for instance, whereas factual knowledge might be about the names of parts of human anatomy, or a series of conditions, deep conceptual knowledge comprises the links and associations required to understand the range of factors that generate or impinge upon a particular health-related condition (Vosniadou 1991). These links and associations are potentially limitless, as the range of factors shaping the health-related condition can be elaborated within or across these factors. That is, the extent of knowledge about a particular topic, let alone a domain of knowledge, is potentially limitless, with the nuances and scope of factors extending interminably. So, for example, the process of learning being discussed in this book can be captured by referring to contributions from outside the person, and within the person. Then, added to this is the importance of the relationship between these two sets of contributions. Given the range of contributions that come from outside of the person in terms of societal norms, forms, practices and the means by which they are projected, and the ways individuals come to construe and construct them are the basest of platforms to fully understanding the process of individuals' learning.

Following from this, for instance, are the particular sets of experiences individuals have had across their life histories and how these shape their subsequent learning. Given that these are likely to be person dependent by degree, there is a need to aware of the range of factors that shape the person-dependent nature of that learning. Hence, it is easy to see how the range of concepts and conceptual links and associations begin to form and in ways which are potentially incalculable. Understanding the causes and needs for prevention of a common ailment can comprise a complex of factors that can be elaborated extensively. Yet, securing deep understanding can only arise when the concepts are understood and the propositional links are known about.

Procedural knowledge refers to those procedures that we use to achieve goals (Ryle 1949). These procedures are also ordered in hierarchies from specific procedures which are single tasks (e.g. writing a memo), through to strategic procedures that are used to achieve more demanding goals such as preparing a more complicated document (e.g. evaluating the kinds of ideas to be advanced, the case used to advance those ideas and the strength of their justifications, for instance) (Anderson 1982; Scandura 1984). Higher order procedures, sometimes referred to as metacognition, assist the conduct of these tasks, including monitoring and evaluating our performance of them (Sun et al. 2001). Specific procedures (i.e. those associated with achieving a small task) are learnt through developing subprocedures and through rehearsal, and come to be performed almost autonomously, requiring little conscious thought (Stevenson 1991). That is, they are learnt through repeated and quite intentional practice (Anderson 1982). However, strategic procedures arise not only through rehearsal, but through engaging in different kinds of practice and being able to monitor and hone their performance and predict the likely consequences. Also here is the degree by which individuals see it as worthwhile investing this effort to engage in practice and hone their procedural capacities. The same is true for higher order strategic procedures that likely arise through engagement in variations and kinds of activities associated with the performance of

procedures (Evans 1991). So, through performing treatments on patients of different ages, fitness, health levels etc, nuanced procedural capacities likely arise. Yet, the readiness to develop such capacities may be premised on a foundation of honed specific procedures. That is, through the ability to perform a range of specific procedures (e.g. bandaging patients, taking blood pressure) whilst being able to perform other activities such as monitoring a patient and discussing with them the implications for high or low blood pressure.

Then, there are dispositions that comprise attitudes, values interests (Perkins et al. 1993a, b) and individuals' intentionalities (Malle et al. 2001). These are important because essentially they drive and guide conscious thinking and acting. Dispositions are the attitudes, values and intentionalities that shape how individuals think and act, which includes how and to what they direct their efforts to engage in activities and learn (Perkins et al. 1993a). There are two dimensions of dispositions: (i) social and occupational specific and (ii) personal. The former are associated with the kinds of attitudes, norms and practices expected of individuals engaging in a particular occupation. At one level, these are the standard patterns of etiquette and workplace requirements associated with human interaction that would occur in most interactions. But, there are also dispositions (i.e. values, norms and personal practices) associated with particular occupations. The occupations comprising teaching, counselling, and health care emphasise patient care, consultation and being sensitive to their needs. This includes practices associated with confidentiality, being discreet and placing the students'/clients'/patient's interests first.

However, it is important to point out that, as well as being subject to individuals' construction, these three forms of knowledge and their various hierarchies and dimensions are highly interdependent. That interdependence is also shaped by individuals. How students value or view (i.e. dispositions) a particular idea or practice (i.e. conceptual knowledge) will likely shape how they respond to that particular task (i.e. procedural knowledge). Together, they provide the bases upon which students' readiness to make sense of what they experience and utilise what they know, can do and value is premised.

## 9.6 Readiness at Work

Given that these three distinct forms of knowledge comprise students' ability to engage in workplace activities and interactions, it is necessary to consider learner readiness in a different way than for stage-related maturation. Instead, individuals' readiness is in terms of their possession of the forms of knowledge that have arisen from their prior experiences and learning. If student nurses do not know how to perform particular procedures, then they are not ready to consider how best it might be adapted to the needs of different kinds of patients. For instance, these students might be learning specific procedures (e.g. taking blood samples) and although aware of the overall task requirements (e.g. talking to and reassuring patients), may not be able to perform that task whilst also learning to take the

samples. That is, they are focusing on the task of taking blood samples and their conscious thinking and acting is directed towards that activity. However, after much practice, these students will be able to perform a procedure such as taking blood without it requiring conscious thought. They are then able to take blood whilst also simultaneously talking to and reassuring patients. However, if they are still engaged in the process of proceduralisation (i.e. developing the capacities to perform tasks still requiring conscious focussed attention) (Anderson 1982), they will not be able to engage simultaneously in other actions. When they have reached the stage of proceduralisation comprising being able to perform specific procedures without engagement in conscious thought, they are able to perform other tasks simultaneously. Taking this example further, a complex task, such as writing something in a genre that is new to an author, can present particular challenges, requiring the individual to focus their attention on effectively adopting that genre whilst expressing what needs to be written, but using words and sentences structures that are commensurate with that style. In this instance, readiness likely is derived from individuals having a clear understanding about language and what they want to express, but doing so using a particular vocabulary.

The same kind issues of are associated with conceptual readiness. That is, whilst the student may know a range of concepts, they may not understand the links and associations amongst these concepts which make them powerful and constitute deep understanding (Novak 1990). Therefore, their readiness is restricted to what they know and this may not extend to an understanding of propositional and causal links and associations. Hence, it is unreasonable to expect students with this level of readiness to be able to make these links and associations. Instead, these students are probably ready for experiences that can build those links and causal associations. That would be a reasonable focus for the next phase of their occupational development. That is, possession of the base ideas are the kind of readiness required to engage in that next level of development.

So, what has been proposed above is that learners' readiness to engage in particular kinds of activities is shaped by their level and kinds of conceptual and procedural knowledge associated with a particular domain of healthcare work. Yet, there is also the issue of dispositional readiness. Securing students' engagement in the effortful ways required for rich learning is quite unlikely if they are uninterested, or opposed to those activities or interactions, or particular study topics. This particular form of readiness in many ways underpins all of the above. How and for what reasons individuals engage in goal-directed activities is central to what they do and learn. No amount of external force, pressure, monitoring and surveillance will be sufficient to overcome human interest, in anything other than superficial and enforced ways.

In conclusion, understanding students' level of conceptual and procedural readiness is helpful for organising experiences to develop further their capacities. Also, their level of interest and focus of their engagement in work tasks and knowledge will shape their readiness to engage in a different kind of way.

## 9.7 Promoting the Development of Students' Personal Epistemologies

The promotion of students' personal epistemologies has, in many ways, been implicitly exercised through the kinds of considerations of the intended, enacted and experienced curriculum discussed in Chap. 7. Then, the kinds of pedagogic practices enacted before, during and after students' experiences in practice settings have been outlined and discussed in Chap. 8 (i.e. Pedagogic Practices Supporting the Integration of Experiences). Certainly, when the range of educational purposes for which providing an integrating workplace experiences within higher education programs are listed, it becomes clear that many of these purposes are richly aligned with the development of students' personal epistemologies, as set out above. As stated in that chapter, the educational purposes associated with integrating experiences in educational and work settings are quite diverse and can be associated with:

- Learning about an occupation;
- Learning about some of the various forms of that occupation;
- Extending the knowledge learnt in university settings;
- Orienting to the kinds of places where the occupation is practiced;
- Building the occupational capacities (i.e. the canonical, conceptual, procedural and dispositional) required to be an effective practitioner of that occupation;
- Developing occupationally specific forms of knowledge and procedures required for particular practice settings;
- Developing more broadly applicable learning that is not restricted to the requirements of a particular setting; and
- Meeting requirements of occupational or professional licensing.

In looking across this list, the understandings about, requirements for and values associated with students' selected occupation are very much premised upon them becoming elements of their personal epistemologies. This developmental process is founded upon educational processes that make them ready and support their on-going ontogenetic development. Equally, the likelihood of understanding the variations of how occupations are practiced can only come through experiencing either directly or vicariously those variations and how these become part of those epistemologies. Similarly, the active processes of extending or reconciling what has been learnt in university-based activities to those in practice are based on individual's construal and construction of what they experience in those settings. Then, the intentional and directed processes associated with being oriented to the circumstances of practice in the first instance, and then building the capacities required to effectively practice, will only come about through the exercise and further development of students' personal epistemologies. Associated with that engagement is the generation of understandings, procedures and values that are robust enough to be adapted to other circumstances. The capacities, interest and agency required to develop these kinds of occupational capacities are founded in

how individuals respond to what they experience, and direct their conscious thought and energies. So, whilst the curriculum and pedagogic practices outlined in the previous two chapters are central to affording experiences from which students learn, without their effortful engagement, intentionalities and conscious drawing upon what they know, can do and value, all of this would be of relatively little worth (Salomon 1997). So, the ongoing development of students' personal epistemologies is central to the higher education project as has been argued repeatedly across this book.

In the following sections, some brief observations are made about the ways in which curriculum and pedagogic practices can be specifically directed towards the development of students' personal epistemologies. Rehearsed here are the categories of curriculum referred to in Chap. 7 and the kinds of pedagogic practices referred to in Chap. 8.

## 9.8 Curriculum Considerations Associated with Developing Students' Personal Epistemologies

Drawing upon the longer list provided in Chap. 7, some of the key considerations associated with the intended curriculum that might be directed to supporting students personal epistemologies comprise:

- Being clear about what needs to be learnt (i.e. the intended learning outcomes) in order to identify what experiences are likely to secure that learning;
- Organising a gradual and staged engagement with practice-based experiences, which seems to suit many educational purposes;
- Aligning the duration of particular experiences with their educational purpose (e.g. orientation versus skill development);
- Acknowledging practice settings as providing experiences to understand the requirements of practice, not merely places to practice, and taking this into consideration when sequencing experiences in academic and practice settings; and
- Intentionally sequencing preparatory experiences and opportunities to consolidate and reconcile learning after practice experiences into the curriculum.

As illustrated earlier in this chapter, in the Molloy and Keating (2011) quote, it is important for students to be aware of what they are to learn. It as has been proposed and is broadly accepted across the constructivist literature on learning and development that individuals play a key role as meaning makers or, as captured here, in terms of construal and construction of knowledge (i.e. their learning). People learn far more across their lives than they were ever taught (Sticht 1987). Hence, if there is intentional learning to be secured, it is important that those who are learning are clear about what they are supposed to learn and why. All of this is fundamental to educational and instructional science, but nevertheless worth

rehearsing here. Not least reason is because much of the learning that occurs across higher education and, in particular, those through practice-based experiences, are not closely guided by teachers. Making explicit what needs to be learnt and for what purposes provides a focus and impetus for students' construal and construction of what they experience (i.e. learning). Yet, as has been indicated earlier, that process of learning can be overwhelming if students' readiness for that learning is insufficient. Importantly, it is the distance between what Vygotsky proposed as the students' zones of potential development (Valsiner 2000) and what they need to learn which is central to whether they are able to extend what they know to effectively engage and learn from what they experience. Consequently, a clear goal for the organisation of education experiences – the intended curriculum – is to organise a staging of students' experiences. Across many of the 25 projects students emphasised the importance of gradual and staged engagement in workplace activities, and in ways which were commensurate with their level of readiness.

In one teacher education project, 81 % of students referred to an approach to engagement in practice that began early in their course and gradually engaged them in the work setting and activities, albeit peripherally (Teacher Education 2). Here, the students who were engaged in a form of work very much premised upon their personal performance (i.e. as teachers), valued the opportunity to have early exposure to different kinds of schools in which they might teach so as to encounter some of the diversity of students who might become that pupils and the kinds of content and teaching methods which are used in those schools. Later, they would engage in practice teaching arrangements, guided by a more experienced teacher. It was this kind of gradual and staged engagement which they proposed as meeting their needs as nascent practitioners. What is interesting here is that all of these students will have experienced schooling themselves and have spent much time as school students. Yet, this familiarity with schools and the schooling environment seems not to have been so important when they were confronted with the kinds of activities which they need to engage with as a teacher. Similarly, in the other teacher education project, which focussed on preparing indigenous teacher aides to become teachers, the students undertook an activity that in which they compared what they could already know and do with the duty statement of class room teachers. This activity indicated how much of that role they could already perform, but highlighted gaps between what they could currently do and what would be required of them as classroom teachers. Hence, through undertaking this activity a clear understanding about their readiness to progress and the scope of the learning was made explicit. Part of the curriculum considerations identified in this program was that short term placements make it difficult to secure transitions in identity because experiences and efforts associated with developing a sense of self as a teacher can become fragmented through such short-term placements. So, at some point in the educational program, most likely towards the end, longer and more engaging placements will be important for developing, not only conceptual and procedural capacities, but also sense of self as a nascent practitioner. All of that is central to and enacted through students personal epistemologies.

One way to support student readiness, particularly in circumstances were work experience might be difficult or impossible, is to draw upon what students already know about work and working life. In one of the business projects it was found that, as in many other disciplines, the majority of students (85 %) were engaged in paid employment (Business 1 project). Similarly, in an Engineering Project (1) it was reported that 75 % of the students worked, and in the music project it was taken for granted that most of the students were working in some way or another in the performance of music. Hence, these experiences might be utilized to make links and associations between that paid part-time work and the educational goals associated with our programs. This then assists utilize what students already know, can do and have views about its worth when engaging with work and working life.

Some of the key considerations associated with the enacting the educational provision set out in Chap. 7 that included students accessing and integrating practice-based experiences within the curriculum are as follows:

- Teachers' interest in learning in practice settings and their capability to enact the effective integration are likely to profoundly affect the experiences that are enacted.
- These capabilities may extend to coaching and assisting students reconcile their experiences, or they might not.
- Teachers' knowledge of and engagement with practice settings beyond the university also likely influences how they enact experiences, including communications with those settings.
- The availability of resources and access to practice based settings will mediate the range of possible experiences for students.
- There may be a need to augment or maximise the available opportunities (e.g. in regional settings)
- The level of supervision should not be premised only on potential harm, but also on securing students' learning.
- There is a need to consider options other than supervise placements to secure intended educational purposes, including students' paid part-time work, their professional employment, opportunities for observation, shadowing etc.
- Students' readiness (e.g. interest, capacities, confidence) needs to be accounted for when enacting particular kinds of experiences.
- Likely need to organise orientations before students engage in practice settings, utilise opportunities for support during practice based experiences and for provide interludes for sharing and reflections after them.
- Additional or specific experiences may be required for particular student cohorts (e.g. overseas students)
- The gradual and staged enactment of experiences in practice settings seems well aligned to building confidence, capacities and interest.

To develop the kinds of capacities needed to practice their occupations effectively, it was some of these factors in combination that students reported as being particularly potent. For instance, they suggested that a combination of authentic activities, some guidance and opportunities for dialogue about those experiences are

the most helpful combination. These experiences were provided through pedagogic practices such as case-based discussion groups (Medical Education project), and opportunities for engaging in practical experiences that could develop practical (i.e. procedural) knowledge, and also led the students to identify gaps in their knowledge and directed they need to engage with their university-based studies (Commerce project).

## 9.9 Pedagogic Strategies Associated with Developing Students Personal Epistemologies

Utilizing the key findings associated with the ways in which pedagogic practices can support student learning, some particular strategies associated with developing students' personal epistemologies are provided below. As indicated in Chap. 8, the kinds of pedagogic practices identified from these fellowships can be categorised into those which might be helpful before students engage in a practicum experiences, during that engagement and then after those experiences.

## 9.10 Promoting Students' Personal Epistemologies Before Practicum Experiences

Firstly, in terms of the development of students' personal epistemologies, from these set of experiences that were identified before commencing their practice experience, it is probably helpful to engage with students to:

- Orientate them to the requirements for effectively engaging in the workplace
- Establish bases for experiences in practice settings, including developing or identifying capacities required for practice settings (i.e. practice-based curriculum, interactions)
- Clarify expectations about purposes of, support in, and responsibilities of parties in practice settings etc (i.e. goals for learning, how to engage)
- Inform about purposes, roles, and expectations of different parties (e.g. advance organisers)
- Inform about and prepare students to engage as agentic learners (i.e. develop their personal epistemologies), including the importance of their observations, and engagement in the workplace interactions, and activities through which they will learn
- If required, develop the procedural capacities required to be effective with tasks in the practice setting
- Prepare them for contestations that might arise in the practice setting (e.g. being advised to forget everything learnt at university).

Adjacent to this listing, are recommendation made by Allied Health students after their strong criticism of a program that aimed to prepare them for their practicums and clinical placements. It was reported by these students that specifically-organised preparatory sessions were of greatest value for students when: (i) they come prior to the first practicum experience; (ii) the experiences are strongly focused on discipline-specific information and procedures, rather than content which students might perceive to be irrelevant or untimely; (iii) they use students' time effectively in advising them about and preparing them for that practicum is; (iv) they draw upon their existing experience (e.g. what they know, work experience, paid work etc); and (v) they provide them with the procedural capacities (i.e. how to do things) so they are able to perform effectively. The journalism project identified a similar list, from its post-experience debriefing. However, this list included a request by students for being briefed about how to act, how to dress, their expected attitude, as all of these qualities were identified by students as contributing to the prospect that their internship learning outcomes would be positive (Journalism project). In the Applied Theatre project, action planning and simulations were added to the list. Also, from another performance-related field associated with developing school students understanding of law and the legal system, after the practicum experiences the legal students requested that that preparation included substitute activities (e.g. meets) and other preparatory activities to develop their capacities to perform effectively (Law project). The underlying set of factors here are preparing students adequately for a new set of experiences, much of which will be quite unfamiliar or will require them to adapt what they know and can do. This led, in at least one project, to students wanting illustrative instances of proven practice and examples of the application of theory to practice (Teacher Education 1 project). Certainly, after practicums in which the students believed they had not been adequately prepared for their experiences, they were quick to criticise. The point is that they found themselves lacking readiness to engage effectively with what they experienced.

As noted above, the immediacy of concerns, was often the basis by which students came to engage and make judgements about what was important, often associated with securing the kinds of information procedures they need to address their immediate concerns (Teacher Education 1, Law, Commerce, Allied Health projects). Hence, this emphasis rehearses what was stated above about the importance of making students aware of what they are to learn and why that is important. Students were not always clear about what would be expected of them and what they were permitted to do. For instance, the Public Relations students' engagement with not-for-profit organisations occurred in the absence of any in-house expertise about public relations strategies. The students had to explain to volunteers the importance of public relations and how this might be helpful for their organisations. Yet, they were unaware or had not anticipated that this would be required in such organisations. Moreover, some lacked the inter-personal skills to manage effective client relations (Public Relations project),

which was also reported in the Communications students' engagement in workplace opportunities. So, these students lacked forms of readiness to engage effectively in workplace settings. Such skills might have been developed prior to the placements through simulation activities or students' consideration of workplace scenarios and interactions which would have promoted their readiness and zone of potential development. In the Law project, similarly, there was a need for students to be active listeners, and being aware of the need to engage and understand others' perspectives.

Also, in the Public Relations project, although the students were working in teams, many failed to fulfil their obligation to other team members claiming they had other interests and priorities. Yet, this was part of how the groups were supposed to work. Hence, again, the importance of emphasising what is required and how groups of workers might collaborate to achieve goals. Being distracted by other priorities was evident broadly across the projects. Hence, a part of many the students' personal epistemologies was to make strategic judgements about how they would dispute that time and for what purposes. As noted above, this led to the label of contemporary students being 'time jealous'. Hence, it is worth considering what these projects reported about effectively engaging 'time jealous' students.

From the experiences in the Allied Health project some of the suggestions from students were: (i) students who have done placements might talk to and advise students about those placements; (ii) make the sessions more interactive so that students could articulate their concerns and seek advice about what was there key concerns; (iii) use electronic means, rather than face-to-face preparatory programs to provide the course content; (iv) have more opportunities for discussion by the students so that they could consider and respond to what was being proposed and expected of them; (v) provide notes and materials that students could refer to later, and perhaps as issues associated with our practicums became real and apparent, and, (vi) explain more clearly the purposes of the sessions and their practical application (Allied Health project). In a project (Business 2 project) where all of the students were employed, instead of starting with what the course intends, the teacher commenced the course by drawing on the students' experiences and learnings from practice settings and then engaged the content to be taught from those experiences (i.e. putting the experienced curriculum centre stage). Across these considerations runs the central concern of being aware of students' readiness and how their personal epistemologies can be positioned to maximise their learning through work-based experiences and their reconciliation with what is the focus of that course of study. Sitting within all of this is preparing students to have agentic epistemologies, to place themselves centrally as meaning makers and being active in that role, within the bounds of what they currently know, can do and value, but also positioning them to extend the zone of the potential development through engaging with others.

## 9.11 Promoting Students' Personal Epistemologies During Practicum Experiences

In a similar way, it was found from across the projects that the effective development of learner readiness and their epistemologies integration was best supported during practice-based experiences if there was:

- Direct guidance by more experienced practitioners (i.e. proximal guidance);
- Sequencing and combinations of activities (i.e. 'learning curriculum', practice-based curriculum);
- Active engagement in pedagogically rich work activities or interactions (e.g. handovers);
- Effective peer interactions (i.e. students' collaborative learning); and
- Active and purposeful engagement by the students as learners in workplace settings.

So, here the concern is to draw upon and extend the learners' zone of potential development through engaging with others and more expert partners to utilise these experiences effectively. Whilst there is a very important orientation to engaging directly or indirectly with more expert partners, there is also the important role that is played by students in identifying and utilising experiences drawing on their practicums in ways which can best promote their learning. For instance, in the nursing project in the first fellowship, students elected to form discussion groups in hospitals, albeit initially facilitated by a staff member (Newton 2011). However, that staff member was able to withdraw and permit the students to continue with these processes in ways which suit their purposes. Also, medical students in an associated project formed their own small study groups to assist them progress through the semester, prepare for examinations and also to deal with difficult moments in their medical preparation (Richards et al. 2013). That is, they elected to work together in small groups with individuals they trusted and could rely upon to provide them with support. In this way, whether needing to be assisted in this role or merely encouraged to participate, the students themselves developed an effective base for their ongoing learning. Hence, following their particular needs and preferences can be appropriate, and these might guide the particular pedagogic interventions. In the Medical Education project, group discussion of cases, were replaced, on request by students for a problem-based learning approach where the cases were presented, and then the group had time to consider the information, reflect and pose possible diagnoses, problems, and management strategies. As it turned out, this was a particularly important strategy for these medical students, who had many rotations through clinical areas across the year. Hence, by engaging in these cases, they were able to draw upon, be reminded about, recall, compare and engage knowledge which they had acquired earlier, yet without such an engagement risks being lost.

## 9.12 Promoting Students' Personal Epistemologies After Practicum Experiences

From the findings of many of the projects that focused on students' experiences after practice-based experiences, in terms of developing the readiness and personal epistemologies of learners it is helpful to:

- Facilitate the sharing and drawing out of students' experiences (i.e. opportunities for articulating and comparing the commonalities and distinctiveness that leads to understanding the canonical and situational requirements for practice);
- Explicitly make links to, and reconciliations between, what is taught (learnt) in the university, and what is experienced in practice settings;
- Emphasise the agentic and selective qualities of students' learning through practice (i.e. personal epistemologies); and
- Generate in students critical perspectives on work and learning processes.

Across the fellowship projects, were they occurred or students made them happen, it was report that they found worth, in appreciating, appraising and comparing and contrasting their practice based experiences (Public Relations, Journalism, Commerce, Communications, Business 2, Law projects), reflecting on what they had done and through these learning about capacities required for effective performance. For instance, in the chiropractic project a key conclusion was that "a structured post-placement seminar, by engaging students in listening, debate and personal reflection, can extend and transform their understanding of chiropractic practice, and promote conceptual, procedural and dispositional development" (Chiropractic project), which was certainly also the case for Law students (Law project). It was also suggested that students' sense of self and viewing themselves as nascent practitioners was partially founded in the ability to engage with practicum experiences and then consider, evaluate, compare and reconcile them with others after the practicum experiences. Yet, it may be necessary, as was the case with the chiropractic project, for these transformations to be guided by teaching interventions. For instance, in considering the transformations required by indigenous teacher aides when becoming classroom teachers that intentional and focussed activities were required to guide the transformation of identity and self of those students through placement activities (Education 2 project) to assist them reposition themselves as teachers. Similarly, in the other educational project it was suggested that teacher education students may need guidance about the purpose and how best to engage in teaching activities because of the workplace variability; through students' different and diverse internship experiences. This was also the case in the journalism project where participation in a post-internship peer reflective session were held to be helpful for students to compare and contrast experiences and to come to know more about the diverse ways in which journalism is practised (Journalism project). Both in this project, and also the one about public relations it was found that these post-practicum events were required to assist students make

explicit links between what students have experienced and learnt in practice settings and the objectives of their courses (Public Relations project). Moreover, it was found that in the Communications project it was necessary for there to be clear guidelines for the post practicum debriefing activities that students participated in. The provision of a structure through which to consider that workplace experiences was important for the students and provided them with a platform through which they could appraise the quality of those experiences and outcomes for them (Communications project).

## 9.13 Developing Students' Personal Epistemologies

In conclusion, it has been proposed within this chapter that is not sufficient to consider educational provisions, such as those associated with utilising and integrating higher education students' experiences in practice settings, in terms of curriculum and pedagogies alone. In addition, it is necessary to account for students as meaning makers, not only for those who are the focus of the educational provision, but also those who engage in the learning and development which are intended by curriculum provisions and pedagogic practices. It has been noted that these personal epistemologies are central to understanding and promoting that learning, and in doing so emphasising the importance of learner readiness. That is, to use a Vygotskian phrase, learners' zone of potential development (Valsiner 2000). It is this zone which permits students to extend further what they know through their own personally mediated efforts, and when these limits are reached, the importance of having others assist and mediate that learning. Consequently, there is much that students can do and have to do to extend the scope of what they know, can do and value, when learning about their selected occupation. But there is also the need for interventions of a teacherly kind to extend the zone of students' potential for development. Within the discussion, it has been noted that elements of students' epistemologies are quite person dependent, but not abstracted from the worlds in which they have engaged. Yet, these epistemologies are likely to be more than mere versions or interpretations, as they are founded in individual students' prior experiences, including what they value and what engages their interest. So, there can be no confidence that single, uniform or standard educational responses will suffice to meet the needs of all students. This is not to suggest that considerations of curriculum and pedagogies cannot proceed with clear intentions and goals.

Clearly, there are particular kinds of experiences that are more likely to lead to the development of specific kinds of targeted knowledge that are the objectives of educational programs. A clear understanding about these objectives is central to the selection and enactment of experiences for students. Those that seek to impart, compare and criticise information are of one kind, whereas those that are associated with developing procedural capacities of the kind required to conduct workplace activities, are likely to be of quite a different kind. So, intentional curriculum and pedagogic practices are essential, and a necessary part of educational provisions.

However, these, whilst being intentional, can only ever be focused towards intended outcomes. The quality of those outcomes is ultimately shaped by how students come to engage with what is afforded them.

Given the centrality of personal epistemologies, it has been proposed that there are certain curriculum and pedagogic practices which might be particularly helpful for the development of these attributes within student cohorts. It is these which have been listed and briefly discussed in the final section of this chapter. There are doubtless many more kinds of curriculum considerations and pedagogic practices. However, these were those that were identified in the two fellowships which have provided the focus and substance of this book.

It will be noted, by even the most cursory of readers, that there is much which is consistent with and central to the overall project of higher education to be found across the chapters that comprise this book. This is an important point. Rather than seeing the provision of experiences in work settings and their integration into higher education programs as being separate or distinct from mainstream higher education, both in terms of purposes and practices, they are encompassed by the broader set of concerns associated with education. That is, the ways in which the educational project is enacted is not restricted to what occurs within educational institutions, their programs and teacherly practices, but instead the kinds of experiences which constitute the totality of what students encounter and engage with as part of their higher education programs. It is hoped that from these nine chapters will come ideas and practices about more fully engaging students' experiences outside of those provided by and within the confines of universities to become part of the overall higher education provision.

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# Glossary

Some of the terms used across this book have particular meaning and are also used by others, so it seems worthwhile to initially set out the meanings of a series of keywords.

**Agentic learners** Learners who are proactive and engaged in making meaning and developing capacities in way that are intentional, effortful and are actively criticality in constructing their knowledge.

**Authentic experiences** Those that are experienced and engaged with in circumstances where the occupation to be learnt is manifested. Most often, that is a physical and social setting that can be described as a workplace (or practice setting), but sometimes, as with creative art and musical occupations, the occupation can be enacted in a range of physical and social settings.

**Curriculum** The kinds of learning experiences in practice settings and higher education institutions and how they are organised, sequenced and enacted. Within this definition, subcategories of curriculum are defined as follows:

- **Enacted curriculum** What is enacted as shaped by the resources available, the experiences and expertise of teachers and others, their interpretation of what was intended, their values and the range of situational factors that shape students' experiences.
- **Experienced curriculum** What students experience when they engage with what was intended through what is enacted, and how they learn through that experiencing, even that which is unintended by those who plan and enact the curriculum.
- **Intended curriculum** What is intended to occur by sponsors or developers in terms of educational goals (i.e. what should be learnt) and learning outcomes as a result of the curriculum being implemented.

**Nondirective guidance** A process of advising and supporting the participants in the conception and enactment of their professional development activities.



S. Billett, *Integrating Practice-based Experiences into Higher Education*,
Professional and Practice-based Learning 13, DOI 10.1007/978-94-017-7230-3

**Pedagogy** The kind of guidance provided to assist students' learning, in the form of teacherly engagements, information resources, learning support and interactions. This includes promoting learner agency.

**Personal epistemologies** The bases by which individuals come to construe and construct knowledge from what they experience, including their interests, intentionalities (i.e. how they direct their energies and interest) and subjectivities (i.e. sense of selves), which shape how they engage with the process of learning.

**Work-integrated learning (WIL)** The process whereby students come to learn through experiences in educational and practice settings and reconcile and integrate the contributions of those experiences to develop the understandings, procedures and dispositions, required for effective professional practice in their selected occupation, including the criticality and reflexivity.

**Zone of potential development** The scope of learning that can be promoted by individuals alone through their capacities, energies and agency (i.e. personal epistemologies) and that this can take them to the zone of nearest development.

# Index





S. Billett, *Integrating Practice-based Experiences into Higher Education*,
Professional and Practice-based Learning 13, DOI 10.1007/978-94-017-7230-3