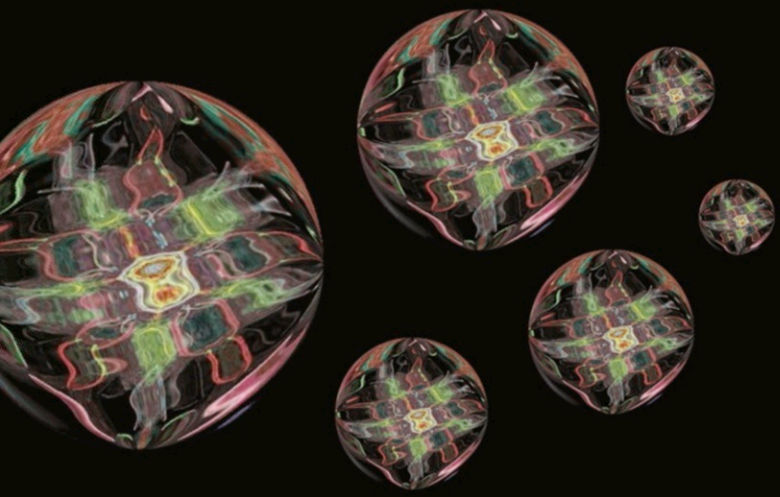
PRACTICE, EDUCATION, WORK AND SOCIETY

Realising Exemplary Practice-Based Education

Joy Higgs, Dale Sheehan,
Julie Baldry Currens, Will Letts and
Gail M. Jensen (Eds.)



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PRACTICE, EDUCATION, WORK AND SOCIETY

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Realising Exemplary Practice-Based Education

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SERIES INTRODUCTION

Practice, Education, Work and Society

This series examines research, theory and practice in the context of university education, professional practice, work and society. The series examines places where two or more of these arenas come together. Themes that will be explored in the series include: university education of professions, society expectations of professional practice, professional practice workplaces and strategies for investigating each of these areas. There are many challenges facing researchers, educators, practitioners and students in today's practice worlds. The authors in this series bring a wealth of practice wisdom and experience to examine these issues, share their practice knowledge, report research into strategies that address these challenges, share approaches to working and learning and raise yet more questions.

The conversations conducted in the series will contribute to expanding the discourse around the way people encounter and experience practice, education, work and society.

Joy Higgs
Charles Sturt University, Australia

FOREWORD

This book is about realisations: the understandings that educators and scholars bring to the enactment of professional and practice-based education, and the way educators along with students realise, experience and embody practice-based education. We provide 30 peer reviewed chapters written by international educators and scholars some of whom are drawing practice implications from theory and research, while others are providing rich, enacted interpretations of theory and visionary examples of practice-based education in their curricula. For educators, scholars, practitioners and researchers this book offers an opportunity to explore and engage with practice-based education theories and concepts in real life teaching spaces. This book provides an opportunity for readers to deepen their understanding of practice-based education and broaden and critically appraise their strategies for engaging with practice-based education theory. It provides insights into new practice-based education theory and exemplary practice and offers many avenues for future exploration and implementation of this powerful way of conceptualising and realising good practice in professional and higher education curricula.

There are three sections in the book:

- **Section 1: Practice-based education for life and work**
  This section provides the context for the book and frames practice-based education as a dynamic curriculum framework for professional and higher education.
- **Section 2: Practice-based education in action**
  This section presents and appraises a range of exemplary practice-based education programs from different parts of the world. These take the form of case studies and narratives that tell the story of exemplary programs.
- **Section 3: Practice-based education realisations**
  The final chapter draws together and adds to the book's realisations about exemplary practice-based education.

Joy Higgs

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SECTION 1: PRACTICE-BASED EDUCATION FOR LIFE AND WORK

JOY HIGGS

1. PRACTICE-BASED EDUCATION PEDAGOGY

Professional Pedagogy for Professional Education

The title of this book is *Realising Exemplary Practice-Based Education*. The choice of the word "realising" was deliberate, to encompass both realising meaning understanding and realising meaning, making real or actualising. And "practice-based education" (PBE) was chosen to focus the book on education which prepares graduates for practice across the considerable range of occupations, vocations, disciplines and professions that universities collectively serve. Such education prepares people to become contributing members of society as well as members of their professional, disciplinary or occupational communities.

So we placed the book in the broad arena of professional education and set out to explore what it means to conduct such education using a PBE approach. A number of the chapters set the scene for examining and contextualising PBE, while others focus on particular PBE courses. In this way we are providing dual paths to realising PBE: from understanding to creating practice *from the outside in*, and from doing PBE to understanding it richly *from the inside out*. Good PBE, then, is presented as education that meets the needs of practitioners (future graduates), practice worlds (including clients, employers, colleagues), occupational groups and society (as funders, setters of standards and regulations, and the collection of consumers of graduates' services). In this chapter I explore a pedagogy for professional education via PBE and present university teaching as professional practice.

CONCEPTUALISING PBE THROUGH PEDAGOGY

This section presents findings of a fellowship program funded by the Australian Learning and Teaching Council (Higgs, 2011a). The goals of the fellowship were to explore and enhance PBE by clarifying good practices in PBE, distributing good practices through publications and debate, and promoting the adoption of good practices in professional education curricula. In pursuit of these goals I identified several challenges:

- how to make sense of the large range of different terms that are used to describe educational strategies for professional practice. Figure 1.1 illustrates some of these key terms and their overlapping ideas
- how to choose among the rich range of possible theoretical options to frame and inform PBE
- how to understand key educational terms such as curriculum, education, pedagogy

J. Higgs et al. (Eds.), Realising Exemplary Practice-Based Education, 3–12.

and practice that are used in numerous ways both conceptually and in practice. Figure 1.2 aims to clarify distinctions and overlapping ideas across these terms

– how to produce a coherent interpretation of PBE to use as a framework and inspiration for PBE in practice.

PBE and Terminology for Educational Strategies

In Figure 1.1 PBE is, by definition, entwined with practice, being the purpose, context and medium for such education. PBE occurs via a range of mediums including classroom, simulated, flexible, distance and independent learning. As well as forming the foundation of professional education curricula incorporating some or all of these potential strategies, PBE involves the key dimension of learning in the workplace, which can occur through a range of conceptual and operational approaches (e.g. workplace learning) both within and beyond curricula. For instance, the term "work-based learning" can refer to learning that occurs through work outside of educational programs and formal institutions.

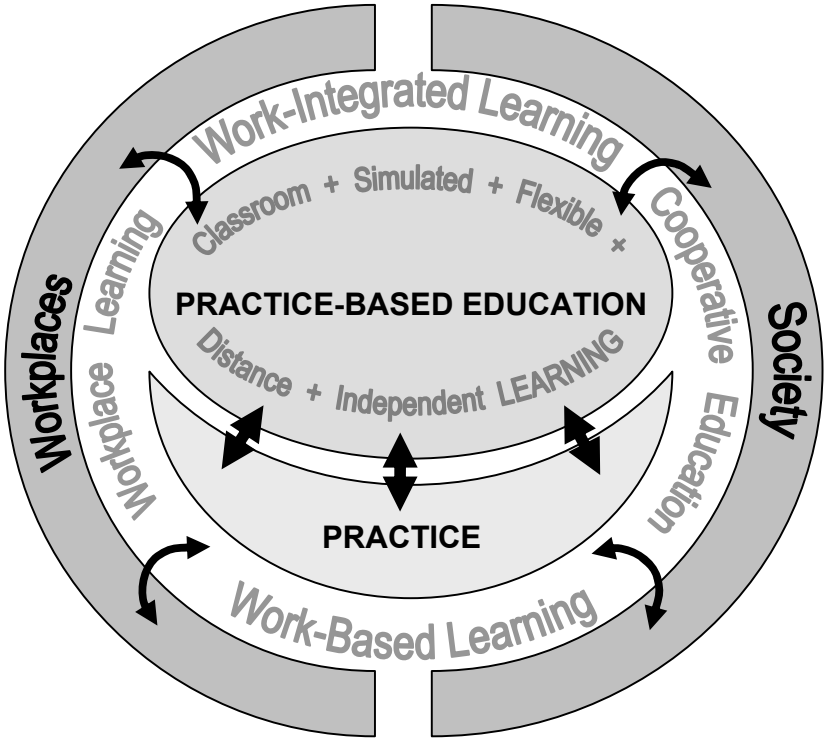

Figure 1.1. Key terms in professional education

PBE Theories

Higgs (2011b, p. 2) identified the key theoretical foundations of PBE as follows. In PBE, learning:

- is situated within practice-relevant contexts
- involves reflexivity, participation and dialogue
- occurs in multiple communities of practice (including workplace, academic, and multidisciplinary communities)
- involves a process of socialisation into professional, disciplinary and occupational worlds, roles, identities and career paths
- involves engagement, through industry partnerships, in practice-based teaching and learning activities
- develops capabilities and behaviours that will enable graduates to contribute to local communities and society as responsible citizens and professionals who display ethical conduct and duty of care.

PBE and Educational Concepts

The fellowship program examined four key concepts: pedagogy, practice, education and curriculum, identifying and examining the many constructs, meanings, definitions and usages in the literature. Each of these four key concepts can be thought of as a domain or field of study and a strategy or group of strategies. The terms can be generic or "field-owned" and "field-appraised," as in "recognised good practices in university education," and personally owned and utilised, as in "different academics' pedagogies and pedagogical approaches."

Education involves: "the passing on of cultural heritage, … the fostering of individual growth" and the initiation of the young or novices into worthwhile ways of thinking and doing (Bullock & Trombley, 1988, p. 254). "Education, in its deepest sense and at whatever age it takes place, concerns the opening of identities – exploring new ways of being that lie beyond our current state. … education must strive to open new dimensions for the negotiation of the self. It places students on an outbound trajectory toward a broad field of possible identities. Education is not merely formative – it is transformative" (Wenger, 1998, p. 263). Education for professional practice extends beyond the time, place and intention of curricula and includes initial preparation and ongoing development across the working life.

Curriculum refers to the sum of the experiences students engage in and acquire as a result of learning at university and the factors that create these experiences. It includes explicit, implicit and hidden aspects of the learning program, and experiences that occur incidentally alongside the formal curriculum. The curriculum is intentional teaching, content and assessment as well as unintentional messages to learners created through role modelling by teachers and workplace educators, through assessment schedules, learning climate, infrastructure (resourcing, facilities, staffing, administrative and support systems), university communities and additional experiences (e.g. sporting, social) that are part of university life (Higgs, 2011b).

Pedagogy (see the space within the dotted line on Figure 1.2) as a domain or field of study refers to a form of social practice which shapes the educational development of individuals, framed around a perspective, model or theory of education that encompasses interactive philosophical, political, moral, technical and practical dimensions. Examples are critical, liberal, vocational and practice-based pedagogical perspectives. Daniels (2001, p. 1) writes, "the term Pedagogy should be construed as referring to forms of social practice which shape and form the cognitive, affective and moral development of individuals." Billett (2010, personal communication) relates "the distinction I have been making between curriculum and pedagogy in recent projects is that curriculum is about the existence and organisation of students' experiences, including their duration and rotation across settings (e.g. different work settings, or between academy and practice settings), and pedagogy is about the enrichment of those experiences by teachers, others, the settings or students themselves."

At the individual level, *pedagogy* refers to the ways educators frame and enact their teaching and curricular practices and their teaching relationships, to enrich their students' learning experiences; such pedagogy is informed by the teachers' interests, personal frames of reference, practice knowledge, theoretical frameworks, reflexive inquiries, and capabilities, in consideration of contextual parameters, educational theory and research.

The term *pedagogies* can be used to refer to learning and teaching approaches, including modes of interpersonal engagement in these approaches as well as the teaching and learning strategies utilised in their educational programs. Pedagogies may be shared (e.g. within a discipline) or personal/personally owned (by an individual educator).

Practice may be collective (e.g. a profession's practice) or individual (an individual practitioner's practice). Collectively, practice comprises ritual, social interactions, language, discourse, thinking and decision making, technical skills, identity, knowledge, and practice wisdom, framed and contested by interests, practice philosophy, regulations, practice cultures, ethical standards, codes of conduct and societal expectations. Individually, a practitioner's practice model and enacted practice are framed by the views of the practice community as well as the practitioner's interests, preferences, experiences, perspectives, meaning making, presuppositions and practice philosophy. The term *practice* can refer broadly to social practice, and more precisely, it frequently denotes professional practice.

The term *practices* refers to the customary activities of a profession, and the chosen ways individual practitioners implement their practice or profession. Professional practices include ethical conduct, professional decision making, client-practitioner communication, consultation and referral, and interdisciplinary teamwork. Individual practitioners interpret and implement practice through their practice models which may be technical-rational, empirico-analytical, evidence-based, interpretive, and critical emancipatory models.

Figure 1.2 provides an interpretive illustration that endeavours to draw these terms together. It illustrates the complexity of making sense of these various ideas, terms and practices. Readers could well draw their own very different diagrams. In

this view *education* is shaped by society and feeds back (knowledge, graduates) to serve the needs and interests of society. *Pedagogy* overlaps *curriculum* and *educational practice* and produces goals and outcomes. *Pedagogies* support educational practice and the implementation of curricula. *Practice* as a concept and collection of action and practices lies at the centre of the diagram, overlapping the other concepts.

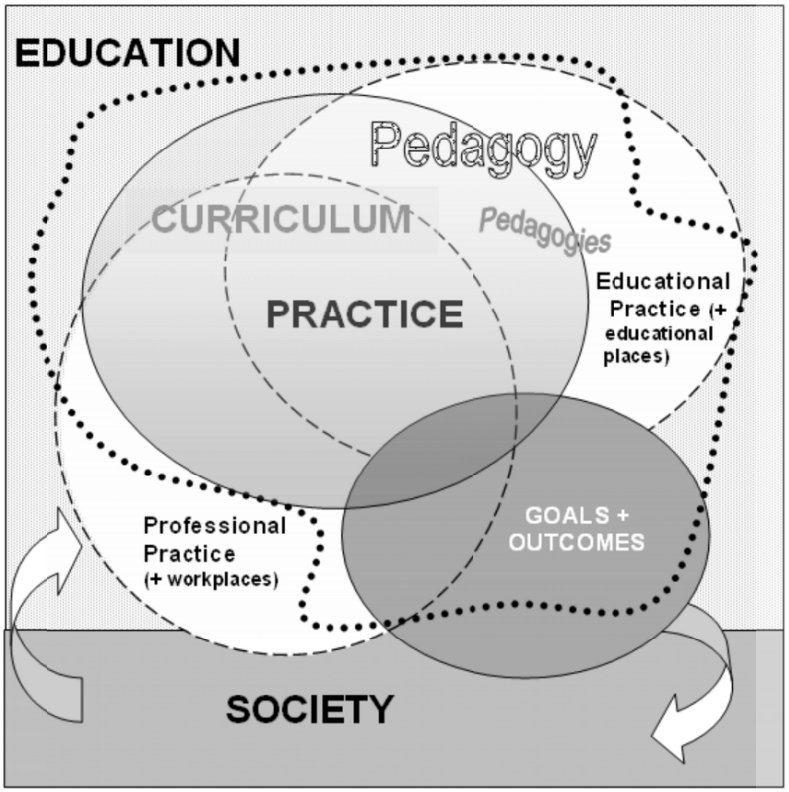

Figure 1.2. Educational concepts and practices

An Interpretation of PBE

From the Fellowship program I developed an interpretation of PBE that builds on theoretical and exemplary practices of professional and PBE. It provides a conceptual view of what characterises good practice(s) in PBE and a framework for achieving it. Here effective, desirable or good-quality PBE is higher education for practice that (a) is *fit for the purpose* of educating high-quality university graduates for society, (b) is *relevant* to the given occupation's practice, (c) is appropriately *situated* in the context of the course and the graduates' work

destinations (both locally and globally if relevant), (d) is *grounded* in and engaged with practice communities, and (e) that satisfies the needs, interests and expectations of relevant stakeholders.

This interpretation of PBE incorporates the four concepts discussed above (education, curriculum, pedagogy and practice). PBE is conceptualised as:

- a *pedagogical perspective***.** In Table 1.1 eight key dimensions of a PBE pedagogy identified through this fellowship are outlined.
- a *curriculum framework*
- a *set of pedagogical practices* or teaching and learning strategies. In Table 1.2 eight key pedagogical practices for PBE are outlined.

Table 1.1. Practice-based education as a pedagogy – 8 key social practice dimensions

Pedagogical frame	Pedagogy refers to a form of social practice that seeks to shape the educational development of learners. PBE is a pedagogy that prepares students for a practice or occupation.
Practice and higher goals	PBE aims to realise the goals of developing students' occupationally-relevant social, technical and professional capabilities, forming their occupational identities, and supporting their development as positively contributing global citizens.
Education in context	PBE inevitably occurs within contexts shaped by the interests and practices of students, teachers, practitioner role models, university and workplace settings and society. Both planned processes (e.g. curricula, resources, pedagogies) and unplanned factors (e.g. changes in workplace access, student numbers) need to be reviewed and enhanced to address these goals.
Understanding (the) practice	Students' prospective practice needs to be appraised and evaluated on an ongoing basis to provide a relevant frame of reference to situate students' curriculum and pedagogical experiences.
Socialisation	Through pedagogical practices, students are socialised into the practices of their occupation/profession and into the many communities and circumstances of practice that their working worlds comprise.
Engaging in relationships	Practice and pedagogy are essentially about relationships. These are realised through partnerships between learners and academics, workplace learning educators and practitioners, among learners (peer learning), across universities and industry or practice worlds, among university and practice-based educators, and with universities and regulatory authorities, professional groups, society.

Table 1.1. (continued)

Authenticity and relevance	The themes of authenticity and relevance are embedded in the goals, venues, activities, student assessment and program evaluation of PBE programs. That is, the curriculum and the key pedagogical perspective are focused on relevance to graduates' future practice. The education approach, including educators' modelled behaviours, should reflect the expectations, norms, knowledge and practices of the profession.
Reflecting standards, values and ethics	A dimension that needs to permeate all aspects of curricula and pedagogies is the concept and practice of standards: standards as reflective of practice expectations and professionalism and professional codes of conduct or industry standards that are part of practice and professional socialisation, standards as accepted pedagogies across the discipline and standards of higher education.

Table 1.2. Eight key practice-based education pedagogies

Supervised workplace learning	This pedagogy involves students learning through engaging in practice in real workplace "placements," with formal or informal supervision by workplace educators or more experienced practitioners. Examples include nursing practicums and pre-service teachers' professional experience. The educators or practitioners act as mentors and role models.
Independent workplace learning and experience	In some courses there is no tradition of, or capacity for, supervision of workplace learning. In such cases students may participate in unsupervised work experience or may organise their own independent learning programs. Some curricula credit students' paid work as a means of gaining work experience and learning.
Simulated workplaces	Universities can establish actual or simulated workplaces where students provide services to clients. Examples of actual workplaces include health services clinics (e.g. podiatry), farms and veterinary clinics. Universities can also simulate workplaces (e.g. radio stations and restaurants) that provide community and on-campus services and enable experiences that simulate real practice or work.
Simulated practice-based learning	Practice can be simulated by creating practice environments (e.g. a simulated police training village), e-learning programs and tools to simulate practice tasks (e.g. online learning of reasoning), problem-based learning (by focusing on cases and problem solving to promote practice-based learning), practical classes (e.g. learning resuscitation), role plays, peer learning projects for clients (e.g. videos), moot courts with avatars to learn about client services.

Table 1.2. (continued)

Distance and flexible practice-based learning	Much PBE is conducted through distance, distributed and flexible pedagogies, recognising students' need or preference for learning at times, places and paces of their choosing. This trend is particularly common for graduate entry, international, interstate, regional or isolated and mature-age students.
Peer learning	Peer learning facilitates exploration of emerging occupational identities, capabilities and knowledge with other students and with diminished authority of teachers. Such learning can occur in person, at a distance and via flexible and e-learning, e.g. peer projects, Skype, chat room. Peer assessment is a useful means of developing and critiquing shared perspectives.
Independent learning	Professional practitioners and workers in many occupations must rely on their own judgements, critique, standards and self-development. Practice-based learning can include self-directed learning, self-appraisal, reflection and self-development.
Blended learning	No single pedagogy is sufficient to meet all the needs of all the students in relation to all the learning tasks and goals of the curriculum. Blended learning addresses this challenge and bridges traditional and innovative pedagogies, on- and off-campus learning, individual and group learning, real, theoretical and simulated learning situations.

Using this PBE Framework/Interpretation

To use the framework, educators should first explore the following questions:

- What is the practice of the occupation graduates of the course will enter?
- What capabilities do the graduates need for this practice community?
- What are the course context and the resources and opportunities available?
- Who will be the key role models and educators who reflect the standards and expectations of the profession? How can authentic, relevant learning activities and relationships facilitate students' learning and socialisation?
- How can we design learning experiences that prepare students well for their occupational roles?
- How will the students help shape the learning activities?
- What pedagogies best suit our resources and workplace options?

FRAMING UNIVERSITY EDUCATION AS A PROFESSIONAL PRACTICE

Thus far the chapter has examined professional pedagogy; now I consider higher education as a profession. Whether academia is a profession is an important question for several reasons.

- With academia accorded professional status, academics (and also researchers) are acknowledged as professional educators, not just discipline specialists.
- With the status and privileges of professionals come the expectations that society has of members of professions; these privileges and expectations are inseparable. Expectations include serving society, acting professionally (exercising duty of care, ethical conduct and respect), keeping up-to-date with educational theory and practice, adding to the knowledge base of the profession and exercising critical self-evaluation.
- As a group, academics are expected to be self-regulatory, responsible for monitoring the profession's knowledge and practices to determine, preserve and enhance what is good practice and to remediate, replace or discard what is not good practice.
- Context restrictions and external controls/incentives can limit professional autonomy and actions and create problematic competing requirements and expectations.

Adopting a position that academia is a profession sets these challenges for individuals and groups of academics. How we face these challenges and seek to maintain and pursue good educational practices is a question for academics individually and collectively, uniquely and systemically, locally and globally.

For individual educators it is worthwhile to recognise that academics in professional education programs become dual role models for their students – models of what it means to be a professional-in-practice and what it means to be a professional educator. Thus the issue of professionalism is doubly important.

A key demand facing university educators, then, is to understand both the practice of higher education and the practice of the profession their students will enter. They need to understand university education as practice, to gain skills in pedagogical practices and to shape their own educational practice models. For workplace learning educators, the emphasis must be on their professional practice knowledge and capabilities but they also need to understand and develop skills in their workplace teaching roles.

CONCLUSION

The sub-title of this chapter is *professional pedagogy for professional education*. In summary, the key argument of the chapter is that PBE provides an idea and an approach to professional pedagogy for professional education programs. Through an understanding of education, curriculum, pedagogy and practice the interpretation or model of PBE presented in this chapter provides a pathway, framework and vision to achieve such professional pedagogy.

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REFERENCES

Bullock, A., & Trombley, S. (Eds.) (1988). *The Fontana dictionary of modern thought* (2nd ed.). London: Fontana Press.

Daniels, H. (2001). *Vygotsky and pedagogy*. London: RoutledgeFalmer.

Higgs, J. (2011a). *Practice-based education: Enhancing practice and pedagogy.* Final Report for ALTC Teaching Fellowship. Australian Learning and Teaching Council, Australia.

Higgs, J. (2011b). *Professional and practice-based education at Charles Sturt University*. 2e. Sydney, Australia: 2e The Education For Practice Institute, CSU, Sydney Olympic Park.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity.* Cambridge: Cambridge University Press.

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DALE SHEEHAN AND JOY HIGGS

2. PRACTICE-BASED EDUCATION

Theoretical Underpinnings

> The basis of knowledge creation is the dynamic relationships that arise from the interaction of people with the environment, generations with each other, and social and physical relationships. (Durie, 2004, p. 1139)

Practice-based education (PBE) is a broad term, referring in this book to tertiary education that prepares graduates for their practice occupations, and the work, roles, identities and worlds they will inhabit in these occupations. In practice as in theory, PBE operates at curriculum level and through particular teaching and learning strategies. A PBE curriculum is one that frames goals, strategies and assessment around engagement with and preparation for practice; it values both learning for and learning in practice and occupational contexts. PBE teaching and learning strategies include explicit activities, such as workplace learning placements, practical classes and simulations where students learn occupational skills and become oriented to their occupational roles, lectures where visions of their occupational contributions are presented, and assignments and online learning activities where they can work on practical problems they will encounter in their future work roles. Across these strategies lie the goals of developing the novice practitioner's professional identity and key profession-specific as well as generic capabilities needed in their future occupations, and the requirement for critique and appraisal of processes and outcomes occurring through assessment of students' learning and evaluation of programs.

Many theoretical and research publications support and address these theoretical foundations. In this chapter we focus on overlapping key theories that we have identified as most influential and valuable for PBE:

- experiential, situated and workplace learning
- social learning theory
- learning in communities of practice.

EXPERIENTIAL, SITUATED AND WORKPLACE LEARNING

A key vehicle for facilitating learning for practice is the provision of opportunities for students to learn through experience in real situations, particularly workplaces, where they encounter the realities of their future practice or occupation. There are three core ingredients to such learning:

- learning through experience

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– learning that is situated – which relates to contextualising or locating that learning in real problems, real settings, real encounters with people associated with the occupational role, and real consequences for action
– learning that facilitates engagement with the occupational workplace.

Experiential Learning

Schön (1983, 1987), Kolb (1984) and Boud and Garrick (1999) have described processes by which processionals learn from practice through experiential learning and reflection. The concepts of experiential learning, reflective practice and self-assessment associated with these authors' work have been universally accepted as valid, essential ingredients of professional development and professional practice. Being able to reflect on, critically appraise and enhance your own performance and its outcomes and being able to judge when to ask for help or another opinion are important professional attributes. It is the reflection on experience and the problem solving that occurs alongside experience that creates what Cox (1988) described as "working knowledge." Working knowledge can be seen as the store of exemplars and experiences with a range of cases that practitioners draw upon to solve work problems. In practice settings, supervisors play an important role in helping novice practitioners develop these skills, not just their knowledge and technical skills.

Situated Learning

In PBE there is an expectation that learning will be *situated* in practice and that learning occurs from being part of the context and reality of practice. Learning associated with practice occurs in a context that has the potential to offer learners opportunities to participate actively in tasks and interpersonal interactions and to be supported while doing so (Lave & Wenger, 1991; Billett, 2001; Sheehan, Wilkinson, & Billett, 2005; Kemmis, 2005).

Placing a focus on situated learning and participation has implications for learners, supervisors and the practitioners who engage with learners. For students it means that practice-based learning is about engaging actively with practitioners and with the tasks and conversations of the workplace. For teachers and supervisors it means introducing students to the practice community, sharing understandings, interpreting meanings, co-learning with students and contributing to as well as identifying with the practice community. The role of the supervisor in making workplaces effective learning environments involves organising and managing learning, guiding students' development and understanding of work practices and their development of self-regulatory skills through participating in activities that help the learner progress from being a novice towards becoming an expert, as demonstrated in Lave and Wenger's (1991) work on communities of practice.

Billett (2001) highlighted the role of combinations of routine and non-routine problem solving as a learning strategy in the workplace environment and the importance of having a supervisor who provides insights into work procedures and declares any "hidden knowledge" that the student may not be able to access and

learn alone. It is important to remember that much of the knowledge that supports practice is tacit. The practice community shares the task of refining professional practice, sharing meaning and developing artefacts accessible to new generations of practitioners.

Hildreth and Kimble (2001) highlighted what they described as the "duality of knowledge" as the traditional "hard knowledge" and an emerging "soft knowledge" culture. Hard knowledge is knowledge that can be quantified and can be captured, codified and stored, whereas soft knowledge is "what people know" (which cannot be articulated, abstracted, codified, captured and stored). Soft knowledge is situated in practice and lives, develops and changes in the practice of everyday practitioners, not in text books, written guidelines or protocols.

Traditional Workplace Learning

Traditionally, workplace learning was associated with guilds. Apprentices were taught by experienced guild members (perhaps, masters). Looking back at this learning approach we see strengths and weaknesses:

- The master/teacher might have been a highly skilled practitioner but not a good teacher.
- The apprentice might have been seen as just a worker rather than a learner.
- The apprentice's tasks would arise from and be limited to the tasks at hand, perhaps not allowing for a comprehensive study of the range of skills and knowledge needed for the practice/craft.
- Differences might exist in the extent to which the rationales and practice knowledge of the master, particularly tacit knowledge, were taught alongside the practical skills.
- Novices focus on the skills inherent in the task rather than learning transferable skills or skills for unpredictable future tasks or problems.

Collins, Brown, and Newman (1989) distinguished between traditional and cognitive apprenticeships. Adopting a cognitive apprenticeship approach, it has been argued, addresses a number of the deficits of the traditional apprenticeship approach. In particular, making the teacher's own reasoning transparent has been shown to be a powerful predictor of learner satisfaction (Smith, Varkey, Evans, & Reilly, 2004). Thinking aloud needs to be a disciplined and deliberate strategy (Ericsson, 2004; Reilly, 2007); it helps novices to apply practice algorithms and guidelines, and assists with the struggle of evidence-based practice and the amalgamation of new knowledge into practice.

Expert practitioners can listen while novices share their thoughts and reasoning, in order to identify strengths and limitations in the novices' reasoning. Cognitive apprenticeships address the thinking as well as the visible skills linked to practice. Novices are exposed to the whole of their occupational roles, not just the task at hand, and the teacher aims to present a wide range of tasks and to encourage students to reflect on and articulate elements that are common across tasks. The goal is to help novices generalise skills, learn when a skill is applicable, and transfer the skill

in novel situations. To translate the model of traditional apprenticeship to cognitive apprenticeship, teachers need to identify the task processes and make them visible to students, situate abstract tasks in authentic contexts, and utilise diverse situations while articulating the common aspects of the task so that students can transfer their learning and deal with the uncertainties of practice.

Contemporary Workplace Learning

Workplaces offer learning outcomes that cannot be obtained in formal components of curricula (Billet, 1994; Evans, 1994; Boud & Garrick, 1999; Candy & Mathews, 1999). In his work on workplace learning, Billett (2001, 2002) emphasised the significance of participation in such learning and suggests that the process of construction of vocational knowledge depends on interaction with the work environment. He maintained that expertise and domains of knowledge are not abstract or universal but are influenced by the circumstances of their deployment. For example, he pointed to the different requirements of medical practice in a small hospital in the country town, a provincial centre, and major teaching hospital in a metropolitan capital. Then there are differences in general practice across communities, with different profiles of age, wealth, and wellbeing.

The performance expectations are shaped by the requirements of the particular work practice, and novices need to develop capacities to meet those requirements. Moreover, because much of the knowledge and capabilities that need to be learned are situated in workplace settings, these settings provide learners with the opportunities and support to participate actively in tasks and experiences that will enable them to develop the required abilities.

The workplace environment plays a key role in aiding novices' development. This can best occur when the workplace can invite the novice to participate, interact and learn as part of everyday professional practice. The affordances or invitational qualities of the professional practice are likely to be most welcome when the learner is unconfident, shy or lacking in social ease. Conversely, workplace environments that are not inviting or of low affordance can exacerbate a learner's low level of confidence and social ease. Learners benefit from being accepted by a work team and being able to participate fully in it, even beyond the benefits of positive working relationships and effective work performance. Such participation promotes initial and ongoing development of individual capabilities through learning with experienced practitioners.

A key outcome of individuals working and communicating together is the development of intersubjectivity or shared understanding (Rogoff, 1990). Intersubjectivity allows activities to occur without the need for constant negotiation, which can be reserved for dealing with new or novel tasks and problems. Intersubjectivity is a learned outcome that arises through interaction with social partners. This shared understanding develops from opportunities for individuals to articulate what they mean, compare that meaning with others, refine and further their understanding through these interactions, and also collaboratively

engage in workplace tasks in which they jointly deploy knowledge and witness, monitor and evaluate their performance.

Intersubjectivity is an outcome of learning that is held to be the product of inter-psychological processes that operate between individuals and social sources of knowledge. The process is important because the knowledge required for effective vocational practice, such as that of doctors, nurses, chefs, and lawyers, does not simply spring from within individuals. Instead, such knowledge is developed and refined over time as practice is intersubjectively developed and refined. Because knowledge of the field has its origins in practices that have evolved over time through the work and reflections of practitioners, particularly expert and wise practitioners, there is a need to engage with these people to learn this knowledge.

Textbooks provide one means of securing declarative and propositional knowledge. Yet the procedures that expert practitioners often use can be especially difficult to write down and capture in text. Even the knowledge that can be written in textbooks may need to be made more explicit or easier to understand by an experienced practitioner to assist novices' learning.

Billett (2001) has recognised that workplace learning is facilitated by being able to access experts, being able to engage in practice and working collaboratively with more experienced peers, and being guided to engage in activities that extend the novice's knowledge. However, due to varied access to and engagement in workplaces, opportunities to enjoy this support in workplaces are not evenly distributed. This may be particularly true for part-time workers (Bernhardt, 1999), and for workers from non-mainstream language and cultural backgrounds (Hull, 1997) working in English-speaking settings. Personal factors such as differences in communication style and personality can also influence learning. There is a reciprocity to participation (Billett, 2001, 2002): the workplace can vary in how much it invites the practitioner to participate, and people can differ in how, and how much, they elect to engage with peers and more experienced co-workers.

SOCIAL LEARNING THEORY

Social learning theorists adopt the position that the learner is an active participant moving into a social learning environment that requires active engagement in the community of the workplace, where the structure of the activity as a whole forms the framework for learning. This is unlike the experience of many learners within the "traditional academy," of being subjected to a largely transmission-based pedagogy reduced to topics and sub-tasks, presented as objectives and tests, with the learner as a relatively passive/compliant participant. It is argued that models of learning that take into account how learning occurs in dynamic and complex team-based work environments and systems involving learning with more experienced practitioners provide a best-fit theoretical framework for practice-based learning.

Approaches to Social Learning

Psychological approaches to social learning propose that the attributes, values and attitudes of the individual continually interact with that individual's behaviour. The individual and the environment continually interact (Bandura, 1977). Psychological theories attribute to individuals several inherent capabilities that underlie learning and psychological functioning. These include:

- Symbolic capability – the ability to memorise information and events.
- Forethought capability – the ability to formulate images of desirable future events and to use them as motivators.
- Vicarious capability – the ability to learn through observation of the actions of others and the consequences of these actions.
- Self-reflective capability – the ability to reflect evaluatively and analyse one's actions.
- Self-regulatory capability – the ability to set standards for behaviour and goals and to direct energies to those goals.

Eraut (2000) argued that knowledge can be conceptualised as a social rather than an individual attribute. His argument draws on the concept of distributed cognition (which involves individuals distributing their knowledge into the environment and depending on or utilising the knowledge of others to act effectively) and the idea that learning is embedded in a set of social relations and may be socially rather than individually constructed. This approach draws on Vygotskian developmental theories.

Activity theorists (e.g. Engestrom, 1987) have focused on bridging the gap between performance of a desired skill and the developmental level of the learner, and provide an account of learning and development as a mediated process. Such theory builds on the work of Vygotsky (1934) who argued that learning does not occur in isolation; rather that it takes place through interaction with the social environment. Vygotsky theorised that social, cultural and historic forces shape individual development. Individuals are active agents in their own development but they do not act in settings entirely of their own choosing, and are influenced by the social context and its impact on knowledge interpretation.

Bakhtin (1990), took a slightly different perspective, suggesting that people need each other not to accomplish tasks but because the other, the outsider, provides the external dialogue. In a study in medicine, Sheehan et al. (2005) highlighted the role of participation in junior doctors' learning. The importance of dialogue with an experienced other emerged as an important factor in developing clinical reasoning skills, in learning to think and problem solve like a practitioner, and in assisting novices to enter the professional culture of medicine. Wells (1999) provided an example of the participation model in action by describing dancing as a cultural activity. A novice joins an ongoing community when beginning dance. Guided by the music and movement of others, the novice slowly picks up steps. Here too the structure of the whole activity forms the learning framework.