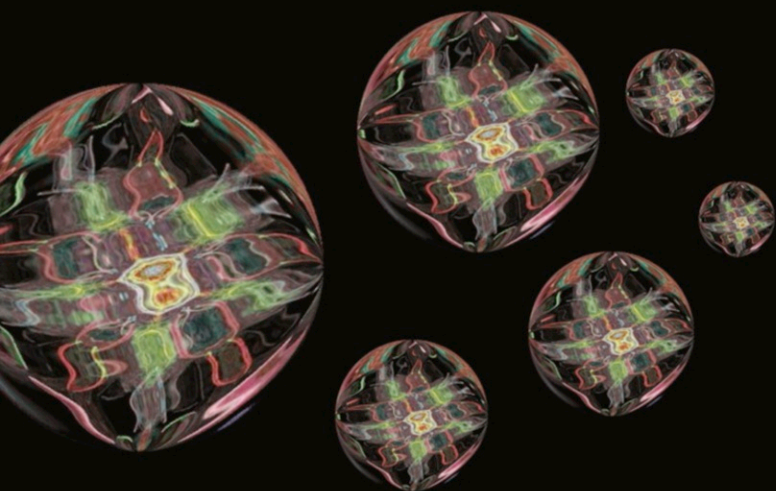# Realising Exemplary Practice-Based Education

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

REALISING EXEMPLARY PRACTICE-BASED EDUCATION

PRACTICE, EDUCATION, WORK AND SOCIETY
Volume 7

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Realising Exemplary Practice-Based Education

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Section 3: Practice-Based Education Realisations

JOY HIGGS

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

Acknowledgements

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

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.
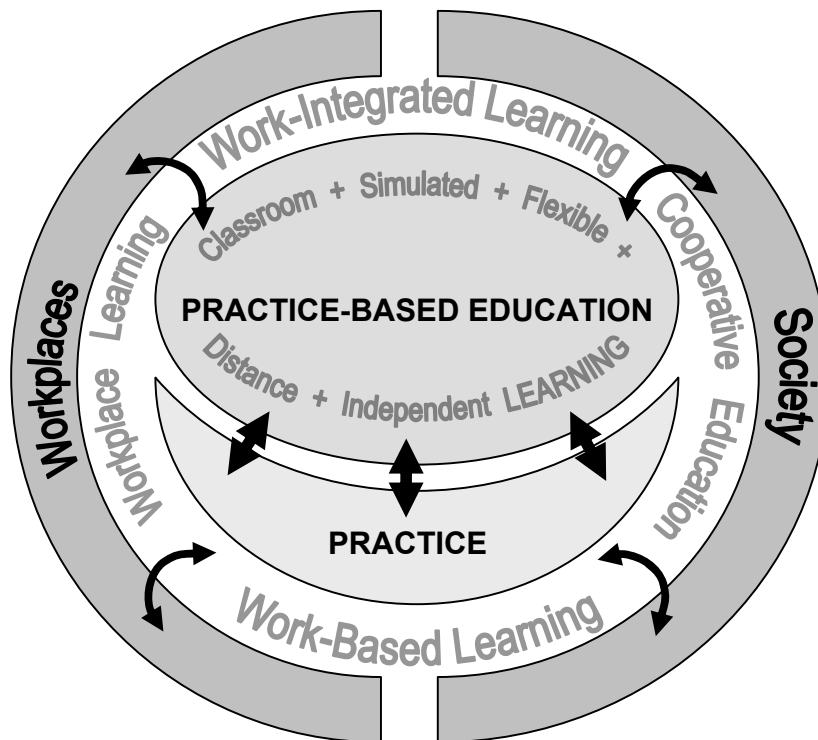
Figure 1.1. Key terms in professional education

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).

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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.
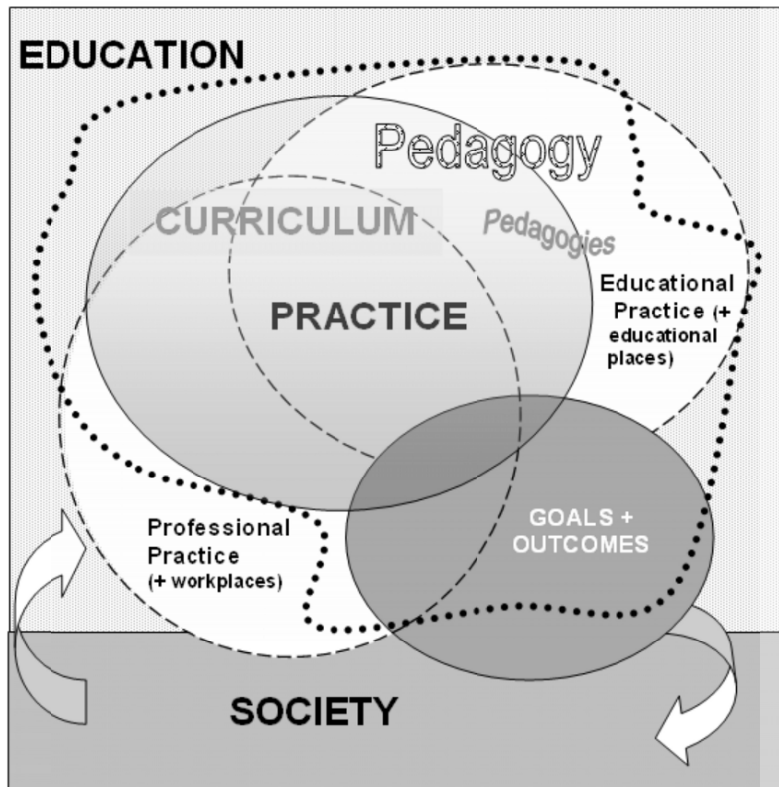
Figure 1.2. Educational concepts and practices

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.

ACKNOWLEDGEMENTS

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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

- 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

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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.

Matusov (1998) also positioned himself within a participation model, along with Rogoff (1990) and Lave and Wenger (1991), offering an alternative to an internalistic model (i.e. one that an individually personally/internally constructs). Matusov (1998, p. 326) argued that internalisation and participation models are different world views:

> The internalization model of cultural development emphasizes transformation of social functions into individual skills … The participation model considers individual cultural development as a validated process of transformation of individual participation in a socio-cultural activity. Transformation of participation involves assuming changed responsibility for the activity, redefining membership in a community of practice, and changing the socio-cultural practice itself.

Table 2.1 is adapted from Matusov (1998). The table is included not to attempt to discuss or to resolve the different theoretical positions presented, but rather to represent internalisation and participation as two models in productive tension. Both world views can inform mentorship/supervision practice and workplace learning; they are seen as complementary not competing. This table identifies both the differences and the shared principles (e.g. the value of reflection, tolerance for ambiguity, the central role of problem solving and professional reasoning, the organisation of tacit knowledge, and knowledge transferability) in participation models so that these factors can inform participatory learning.

As an example of individualistic learning, when Schön (1983) described a process of reflection by which professionals learn from practice, he was describing a largely personal or individualistic process – something that was happening within an individual. Schön (1983, 1987) studied the way various professionals made decisions and found similarities between diverse groups such as nursing, architecture and the law. He concluded that in complex activities, practitioners did not apply rules directly from the textbooks. Instead, they linked existing knowledge from their reading with practical knowledge from their experience and thereby created their own rules for decision making. These rules were rarely written down, but were accepted as an inherent part of becoming a professional.

Experienced professionals experiment in their practice; try out new ways of doing things, take notice of the outcomes and then modify their practice as a result. Schön (1983, 1987) coined the term *reflective practice* for this process and identified two forms of reflection, *reflection in action* and *reflection on action*. Reflection in action is noticing what is happening when it happens; it demands active observation, looking for significance, and making a mental note of the details. Reflection on action takes place after the event and involves reviewing the events that occurred in order to develop a deeper understanding of them.

Table 2.1. Internalisation and participation models of learning

	Internalisation/Individual	Participation/Interactive
Social and psychological planes	– The social and psychological are seen as separate – The social experience and interaction with others is recognised as influential – Reflection on practice is the vehicle for internalisation	– The social and psychological are mutually constitutive and inseparable – Transformation occurs through participation in the professional environment – Reflection in and during practice mediates the process – Reflection is informed by others, socially derived
Joint and solo activities	– Joint and solo activities are separate, with solo activities being seen as psychologically and developmentally more advanced – Personal competence is independent and independent practice is more advanced than collaborative practice	– Mutually constitute each other – Solo activities occur in the context of sociocultural workplace activity rather than as a context-free mental function – Emphasise interprofessional and professional competency – Outcomes are co-produced with others and are enhanced
Transfer and continuity	– Skills and function exist outside activities and are therefore transferable from one activity to another	– Skills and functions are embedded in practice tasks and activities – Meaning is distributed across time, space and participants – it is interpreted and renegotiated with every team and client encounter
Course of development	– Objectivity is defined by the sociocultural nature of the profession as a community – Personal development is influenced by society and internal reflections but remains the responsibility of the individual	– Individual creativity and values shape the process of professional development and contribute to defining direction – Decisions are made within a community or team and knowledge is co-produced with and by team members
Assessment of progress	– Progress is assessed by comparison of skills and functions before, during and after an intervention – Mastery and appropriation of skills are the markers of success – Knowledge is assessed as private capital – accumulation	– Assessment is based on the monitoring of the processes of change and level of participation – Individual tests are construed as joint activities with supervisors in the context of the workplace activities and are linked to holistic outcomes – Moving to expert status within a community through participation is the marker of success

Adapted from Matusov (1998, pp. 229-230)

Daley (2001) investigated how knowledge becomes meaningful in professional practice across four professions. The findings indicated that professionals make meaning by moving back and forth between continuing professional education programs and their professional practice. "This study suggests that the process of

knowledge becoming meaningful for professional practice is tied tightly to the nature of professional work" (p. 52).

More recently, authors such as Kemmis (2005) have described learning as a more social process. "The ideas and understandings that give form and content to our reflection are socially given: they come from a socially constructed world of meanings and significances" (p. 143). Within this conceptual framework, action, which follows reflection, has its meaning in a social world as others understand us through our actions and conversations.

Wenger (1998) outlined a theory of social learning that takes participation as the basis of learning and requires active involvement in the practices of the social community. In this model, there is a process of change that occurs as the individual becomes more and more involved in the community, a change that Swanwick (2005) described as being "more about being than doing, and this progression may be enhanced by creating a favourable working environment" (p. 862). A description of Lave and Wenger's (1991) concept of community of practice follows, as we believe it offers a useful framework within which to describe learning that is situated in practice and the development of professional identity.

LEARNING THROUGH COMMUNITIES OF PRACTICE

While studying apprenticeships as a learning model, Jean Lave and Etienne Wenger (1991) identified a *community of practice* (CoP) as a concept for understanding how people learn in a social environment. They observed Yucatec midwives, tailors, quartermasters, butchers and recovering alcoholics, and traced the progression of the individual practitioner from newcomer to full member of the community. They noted that very little observable teaching occurred and that the foremost process was learning. Many of the exchanges of practical information and problem solving occurred during informal gatherings where tradesmen exchanged stories and novices could consult with experts in a non-threatening environment. Through this process, gaps in knowledge were identified, solutions proposed, tested by individuals and fed back to the group. These informal communications were the way knowledge was shared and created.

Wenger (1998) later described three interrelated dimensions of a CoP, namely mutual engagement (leading to shared understanding and meaning), joint enterprise (engagement and working toward a shared goal), and a shared repertoire (common jargon and resources). Since 1991 several definitions for a CoP have been offered. Wenger and Snyder (2000) defined a CoP as "groups of people informally bound together by shared expertise and passion for a joint enterprise" (p. 139). Mutual engagement is interaction with one another, not just in the course of doing work but to clarify that work, to define how it is done and even to change how it is done. In a joint enterprise, members of a CoP work together to accomplish something on an ongoing basis; they share work and they see clearly the larger purpose of that work. A shared repertoire is described as members having not just work on tasks in common but also sharing methods, tools, techniques and even language, stories and behaviour patterns.

The CoP idea is a way of conceptualising how practitioners can share and gain situational knowledge. By sharing stories and experiences (mutual engagement) practitioners can reflect and receive feedback (shared repertoire) from other members of the group on a shared passion or subject (joint enterprise). This sharing leads to new ways of doing and so creates a cyclical learning pattern that is driven by practitioners themselves. Wenger (1998) theorised that meaning is continually negotiated and renegotiated through the processes of participation and reification, which is derived from the active experience of ongoing practice and the use and development of shared artefacts. He argued that negotiation of meaning is historical and context-specific. The community may contact other professionals and seek expert guidance or access new material, but it is their need to solve a problem that drives learning and they use new information to negotiate their community meaning.

Lave and Wenger (1991) argued that learning and professional identity development begin by practising legitimately on the periphery of a community and then moving toward full participation through negotiating one's place in the community. In this process newcomers learn the practice of the community from its established members, by being situated in it. This is not the same as the concept of acculturation or socialisation; it is "a more encompassing process of being an active participant in the practices of social communities and constructing identity in relation to these communities" (Wenger, 1998, p. 4). In this process newcomers learn not only the practice of the community but also what it means to be a member of that community, through interaction with and observation of established members of the community and the border communities associated with it.

There are a number of limitations to the Wenger's concept and it has drawn its share of criticism. One such criticisms is that does not address issues of conflict and unequal power relationships that can occur in clinical workplace contexts (Cox, 2005). Lave and Wenger's original study (1991) acknowledges intergenerational conflict, yet it does not explain the other power relationships and influences within the community such as between established members or with border communities. In his 1998 work (when the focus was on identity) Wenger stressed the importance of trajectories travelled by members as they move from the periphery of a community to full memberships and the dilemmas that multi-membership and boundaries between communities creates for members, but power was not a central concern. Other criticisms concern lack of clarity and problematic use of the terms "community" and "practice."

CONCLUSION

It is important to note that adopting a social learning approach does not necessitate a withdrawal from current practices that facilitate individual learning. Instead, a social learning approach complements and supports those practices. As Bleakley (2006) noted, "the family of learning theories is based on how individual learners need to be supplemented to inform safe practice in dynamic and often high-risk contexts such as teamwork" (p. 156).

Similarly, Eraut (2002) and Fuller, Hodkinson, Hodkinson, and Unwin (2005) have commented that although participation in a CoP is a good way to learn, it is not the only way. They stress that formal education and teaching in the workplace should not be overlooked. Certainly, procedural skills and the need for individuals to demonstrate competence are likely to remain important aspects of practice-based learning for new practitioners.

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3. PROFESSIONAL PREPARATION FOR PRACTICE

A Pragmatic Overview

Professional preparation for practice is a complexity of knowledge, inquiry, aspirations and culture that spans a multitude of fields. Regardless of the professional field under consideration, the goal is the same – to prepare students to become practitioners in the profession. In this chapter, we focus on four main areas as a pragmatic overview to preparation for professional practice: (1) a brief history of professional preparation for practice in the United States, (2) based upon metaphor, a descriptive model, related to professional preparation for practice, and (3) issues pertaining to preparation for professional practice, culminating in a revised model. The chapter ends with (4) a summary and key considerations for the future of professional preparation for practice.

A Brief History of Professional Preparation for Practice in the United States

In the United States, the professions of divinity, law, and medicine were at the forefront during its origins. These three fields have long been recognised as mature professions, and preparation for practice in these fields has recently been the focus of ongoing study by the Carnegie Foundation for the Advancement of Teaching (Shulman, 2005). Mature professions are those having, to a greater or lesser extent, the following five characteristics: (a) a body of theory and research, (b) placement of personal need to greater good of service to society in some manner typically codified by a code of ethics, (c) privilege of the members of the profession to practise in an exclusive or unique area according to some form of community sanction such as accreditation, licensure, or other such regulation, (d) authority to practise without interference from those not in the field, and (e) embracing the cultural values or norms of the profession (Lal, Khanna, Chandani, & Nahar, 1998).

When the United States first began, in these mature professions, students attended classes and were granted degrees as a matter of course (in cursu) at the end of a program of study, with perhaps a short paper required. Mostly, however, the preparation for practice was the completion of a course of studies with minimal, if any, evidence of having learned. As university and graduate education evolved in the United States, professional preparation changed to granting of a degree qualifying the student, upon completion, to practise based upon merit (pro meritis) that consisted of completion of courses, examinations and a thesis

(Robbins-Carter & Seavey, 1986). Thus the United States changed, as did most of the world, to a process of deserving or merit to practise in a profession based upon successful completion of prescribed or delineated tasks that are, in some manner, agreed upon by the profession. Concomitantly, accreditation agencies for the specialty certification of these professions arose in the United States, posing a unique method of certification of professional education that is not replicated worldwide. Across the world, accreditation of training programs and professional registration ensure quality of professional programs and their graduates.

A Descriptive Model Based upon Metaphor

Prior to posing a metaphorical model for professional preparation for practice, just what is meant by professional practice needs clarification. Professional practice is defined as the use of one's knowledge in a particular profession. Higgs, Loftus, and Trede (2010) suggest that professional practice is "a social practice to serve, contribute and to improve the world" (p. 3). Preparation for professional practice is the collective set of activities prescribed for completion of study in order to be eligible to practise in a field. The categories of the collective set of activities are what constitute the metaphorical model of professional preparation for practice based upon Sullivan and Rosin (2008), as presented in Figure 3.1.

Figure 3.1 presents a descriptive model based upon activities and attempts to capture categories of professional preparation across all professions in three metaphors – habits of the mind (to think), habits of the hand (to act), and habits of the art (to do in a skilled manner). A habit of the mind is the metaphor for cognitive learning, thinking, and other such intellectual activities. A habit of the hand is the metaphor for the skills or sets of skills unique to and shared across a profession. A habit of the hand includes the cycle of practice and reflection upon practice that transforms the tacit knowledge of novices into expert knowledge over time. A habit of the art is the metaphor for the doing of the profession at the highest level of practice while embodying the values and mores of the field. No metaphor is perfect. The metaphors depicted in Figure 3.1 may overlap, in part, since we believe that habits of the art include the cycle of practice, and reflection upon practice, which transforms novices' tacit knowledge into expert knowledge over time.

Brint (1994) and Sullivan, Colby, Wegner, Bond, and Shulman (2007) presented six characteristics of professional learning for practice which are related to all professions. Although they do not agree on the order, the concepts presented are quite similar. As their ideas are presented, they too shall be linked to the metaphors presented in Figure 3.1. First, there is learning fundamental knowledge and skills – including academic knowledge, theories, understanding of research and the ability to recognise changes in society that relate to knowledge. We postulate that this area of learning most relates to habits of the mind as presented in Figure 3.1.

HABITS OF THE MIND

- Didactic coursework
- Hypothetical case reviews
- Papers, manuscripts, poster and oral presentations
- Understanding research
- Academic examinations

HABITS OF THE HAND

- Observations
- Lab classes
- Supervised practice
- Apprenticeships
- Practical examinations

HABITS OF THE ART

- Incorporating concept of service to society
- Learning to make judgements in complex, changing situations
- Participation in conferences at local, regional, state, national, international levels
- Engaging in meaningful research
- Doing and disseminating research
- Connecting theory and practice in meaningful ways
- Courses pertaining to preparation for specific internships or clinical experiences
- Informal and formal get-togethers with family, practitioners or leaders in the field
- Being a good, skilled practitioner
- Acting ethically

Figure 3.1. Metaphorical habits. Model based upon Sullivan and Rosin (2008)

Second, there is practising learned knowledge and skills in the field, which may be referred to as an apprenticeship and is reflected in Figure 3.1 as habits of the hand, or doing. Third, Brint (1994) and Sullivan et al. (2007) each speculated upon the ability to engage in complex practice – this involves learning from experience, combining the knowledge from the academy with knowledge learned in the field. Learning to be reflective and reflexive in one's own practice to enhance further learning is a part of this. We postulate reflectivity and reflexivity to be in the metaphorical category of learning the art of the profession, or habits of the art. Fourth, preparation for professional practice requires learning to make judgements in a situation that is uncertain. This involves taking knowledge learned in the academy, using professional judgement that is gained in the field and applying it to particular situations in the field, which we postulate belongs in the metaphorical category of habits of the art. Fifth, a sense of service is part of professional preparation for practice, since professions serve society and students must understand (learn) that they are responsible to society and be willing to serve society. We categorise this as the metaphor of habits of the art. Sixth and finally, Brint (1994) and Sullivan et al. (2007) identify learning to engage in a professional community as preparation for practice. Professions are communal and students need to learn to become part of and engage in the professional community. We also place this last characteristic in the category of habits of the art. It is interesting to note that most of these six characteristics presented by Brint (1994) and Sullivan et al. (2007) fall into the metaphorical category of habits of the art – though undoubtedly they are related to the other two categories in some manner.

Issues Pertaining to Professional Preparation for Practice

Each profession typically has a prescribed set of activities that have different percentages of time or commitment within each of the categories of metaphor of the model, and which are addressed in various ways in the other chapters in this book. For purposes of this chapter, categories or professional preparation activities are listed as mutually exclusive, when in fact they are not. The salient point is that almost all preparation for professional education includes educational activities pertaining to each of these metaphors. It is the methods and tools of how the activities are accomplished and the amount of value or related time spent in each of these metaphorical categories that vary by profession and standards of education. Different professions emphasise these six characteristics to different degrees.

From our collective experience and from the literature, it appears that most of the "academic" university time is spend in habits of the mind, with habits of the hand the next most addressed, and with habits of the art receiving the least amount of academic educational time. Perhaps these relative weights need to be changed, with habits of the art receiving the most focused time and study on part of learners. If so, how would educational preparation differ?

There is rarely equal attention given to thinking, performing and professional activities. For example, the education of lawyers emphasises "how to think like a lawyer," with minimal attention to habits of the hand and habits of the art (Sullivan et al., 2007). More recently, medical education has focused on learning from experience and problem-based learning (Garvin, 2003), which attempt to assist learners in transitioning from habits of the mind to habits of the art. In many professional education programs, however, the two key concepts that rise to the surface are signature pedagogy (case methods in law; medical rounds in medicine) of the profession, coupled with some form of apprenticeship. Yet apprenticeship may not even be called that, as the intensity, length and commitment required in each profession vary greatly.

A great concern arises related to how to increase knowledge and skills as practice changes and grows over time and how best to foster well-reasoned decision making, including the development of practical judgement in complex situations. Decision making and practical judgement are potentially the most difficult of the six characteristics to teach. The Carnegie Interdisciplinary Seminar held from September 2002 to December 2003 focused on teaching for practical responsiveness (Sullivan & Rosin, 2008). This was viewed as potentially "a unifying calling for educators in the contemporary academy" (p. 45). Working with professors from a wide range of liberal arts and sciences, they found that a common theme emerging was the hope to foster practical judgement in their students. The intent was not to teach critical thinking, but to develop students' responses to ever-changing situations in ways that demonstrated skill and insight and could be defended (Sullivan & Rosin, 2008). Sullivan (2010) described the twin elements of learning as the development of knowledge and judgement as a foundation of joining theory and practice, the penultimate habit of the art.

All the previous literature cited indicates that the most complex and intangible part of preparing professionals is helping students and novice professionals to deal with the nuances of practice. Practice requires us to think on our feet, understand the client's needs, discern the context of the situation and provide the best possible response. This requires us to quickly and, hopefully, expertly use our practical reasoning to make professional judgements about the situation. To do this, one should have a thorough understanding of what we are calling the habits of the mind, coupled with the habits of the hand. One expects that the habits of the art will be the outcome, but we have all seen professionals who were excellent students and yet were just competent professionals or could not successfully complete apprenticeship education.

How does one teach the art of being a skilled lawyer or the bedside manner required of an outstanding physician? It is somewhat intangible. It requires people to be able to use their knowledge in action, to automatically respond to needs as if that response was intuitive rather than based on learned information. Does it come from mentoring? Is it based on experience? Is it personality based? It is somewhat amorphous, and even mystical? Can it really be taught? Garvin (2003) suggested that case-based teaching and problem-based learning experiences enhance this ability by providing group learning situations where students learn from each other and are exposed to different ways to think through problems. These methods may promote more reflection on actions and models of how to work through a complex situation.

Our second iteration of the model, Figure 3.2, reveals one view of how to model and conceptually think about these issues as presented.

Figure 3.2 presents a "triangle of experience," predicated upon mentorship, interaction with practice, coupled with reflection and reflexivity as the critical, intervening set of experiences that address the integration and synthesis essential for the habit of the art called for by Sullivan and Rosin (2008). That is, we may not know exactly how to foster and develop integration of all three metaphorical habits, but we have a pretty good idea that it is the triangle of experience that allows it to grow and develop, from the student level to the expert level, over time and engagement in the activity of the practice of the profession. How much do our current academic programs truly address learning in the triangle of experience? Is that another venue for assessment of how we develop practitioners?

Along with Figure 3.2, two additional key elements should be considered. First, there are the major influences on practice-based education that Higgs et al. (2010) identified. These are consumers, interest groups, practitioners, professional groups, disciplinary groups, associations, funding agencies, regulatory agencies, governments and employers. This is an exhaustive list of influences on practice that greatly contribute to its complexity and ever-changing nature.
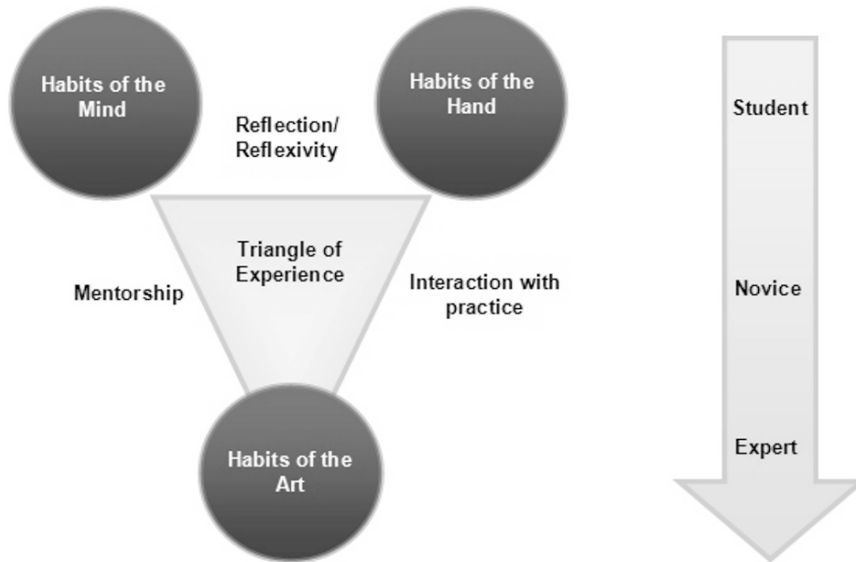
Figure 3.2. Revised metaphorical habits for preparation for practice
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The second key element that needs consideration is what Cherry (2010) calls white space. White space may be considered as yet another metaphor, but this time for the unknown. The white space is that which research does not yet reveal and may not reveal regarding preparation for professional practice. It is a novel concept that allows for expansive consideration of that which we do not know about professional preparation for practice.

Summary and Key Considerations for the Future of Professional Preparation for Practice

This chapter has presented a brief history of professional preparation for practice in the United States, a descriptive model for considering professional preparation for practice, and identification of issues pertaining to education for professional practice culminating in a revised model. We now present what we consider are three fundamental issues that need urgent attention in preparation for professional education in the future. These are the amount of content addressed, the management of content, and an articulated way of developing the art of practice.

In 1974, Mayhew and Ford identified that with increasing amounts of research and knowledge, the ability of any educational platform to keep a student abreast was lacking. That was in 1974. How much has changed since then? Yet how do curricula typically address this issue? By adding more content – something which

Dewey would view askance. We have to be better at developing core knowledge for what Meyer and Land (2005) termed "threshold learning," that which serves as a throughway or portal for the learner to go to the next level of knowledge, understanding and synthesis.

Similarly, we are inadequately developing professionals as information managers. The successful practitioners of the future will have ways and methods of effectively and efficiently managing data to discern salient points and key features for synthesis and application. Just as there has been a call for general health literacy, we make a call for data and information management literacy as expressed by Mandinach, Gummer, and Muller (2011). This would, in fact, take us beyond "evidence-based practice" into "information-based practice" using all forms of evidence, including understanding and implementation of theory, experience of practice, and use of records and context synthesised or tailored for targeted use.

Finally, we need to continue to explore ways to educate students for the art of practice. Despite how amorphous this may be, students need to learn how to think on their feet and apply their knowledge. They need to learn how to become reflective and use all the resources available to them, both from an information management perspective and drawing from their own experiential perspectives.

In closing, the words of Higgs et al. (2010, p. 11) foreshadow how to address the future of education for practice:

Education for future practice involves the pursuit of clarity of shared purpose in the midst of turbulence.

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ANN WEBSTER-WRIGHT AND JOY HIGGS

4. LEARNING FOR LIFE THROUGH PRACTICE-BASED EDUCATION CURRICULA

Live as if you were to die tomorrow.
Learn as if you were to live forever.
Mahatma Gandhi

While the focus of practice-based education (PBE) is on students becoming practising professionals, we contend that professionals inevitably and desirably bring their life experience to their practice, and so PBE curricula should also encompass learning for life. We want professionals to engage with the people and communities they work alongside, to be productive global citizens and to be enriched as people from their work as professionals.

Terminology

In this chapter we address the nature and place of *learning for life* through two dimensions: lifelong learning and lifewide learning.

The need to support *lifelong* learning has become firmly established in higher education over the past 30 years. Learning continues well beyond graduation, so professional education must support students in developing the insight and skills necessary to continually inquire into, enhance and learn from their practice. What they know and do as professionals will alter considerably in response to the many changes that occur through people's working lives. Although consensus has been reached about the value of facilitating lifelong learning, how such learning for an unknown and uncertain future can best be supported through PBE is the subject of considerable current research (e.g. Billett, 2010; Higgs, Fish, Goulter, Loftus, Reid, & Trede et al., 2010).

The notion of learning from life in a broader sense is not so widely established in higher education. Initially the term *lifewide* learning referred to informal and incidental learning in community and adult education settings. The concept has since been embraced within professional education to refer to the value of extra-curricular activities as well as the involvement in activities integrated into the curriculum that support students' individual interests, such as service-oriented or creative ventures (e.g. Butin, 2005; Barnett, 2011; Jackson, 2011). Student populations are increasingly diverse in terms of age, prior experience, cultural and socioeconomic factors. Many students work or juggle family needs.

Exemplary PBE curricula value the richness of such diversity, highlighting the learning that takes place in life beyond formally assessed activities. From awareness of the need for self-sustenance and time management to development of empathy and cultural awareness, such a breadth of learning experiences has a profound influence on who the professional becomes.

What Is the Purpose of Higher Education?

This question is a core focus for our discussion in this chapter. Proposed purposes range from education for an economically viable workforce to education that develops ethically engaged citizens (see e.g. Strain, Barnett, & Jarvis, 2009; Nussbaum, 2010; Enders, de Boer, & Westerheijden, 2011; Hodson, 2011; Marginson, 2011).

Almost a century ago, Dewey (1916/1966, p. 236), the educational philosopher whose theories underpin much of the current emphasis in higher education on reflective inquiry, action learning and communities of practice, asserted that education should aim beyond the development of knowledge and skills towards the development of "a life of rich significance." In *Democracy and Education* Dewey referred to an education that enhances both the life of a person and his or her ability to contribute to society. Life skills such as self-awareness, curiosity, creative thinking, critical reasoning and a reflective stance can enable a professional to flourish in life and to contribute as a professional and socially aware citizen towards the greater public good in addressing some of society's complex needs. Indeed, the attainment of academic excellence without a broader learning-for-life vision has been described as a hollow goal (Lewis, 2007). Education for a life of rich significance could be summarised as the transformation of students into professionals "with the learning and wisdom to take responsibility for their own lives and for civil society" (Lewis, 2007, p. xvi).

Even without explicit intent, education reaches across life. One useful way of considering professional education within the totality of a lived life is to draw on the social constructionist notion of the lifeworld (Berger & Luckmann, 1966/1981; Dall'Alba & Sandberg, 2010). From this perspective, the person and the social, structural and temporal context are considered to be inextricably intertwined as a whole, through lived experience within a shared and intersubjectively meaningful world. Within our lived experience, we shape and are shaped by interactions with others: in our family, university, workplace and other communities. Life presses in upon the professional realm and demands to be considered within an exemplary education program.

Becoming a Professional in Contemporary Society

What constitutes a professional life of rich significance? As society's reach becomes more global and more interconnected, and higher education participation becomes more equitable and diverse, strong arguments have been made for developing workplace-competent professionals whose analytical and critical

abilities are integrated within a wider sense of civic, ethical and moral purpose in contributing to the greater common good (Purtilo, Jensen, & Royeen, 2005; Walker, 2006; Sullivan & Rosin, 2008).

Arguments exist as to what constitutes the greater common good and how, within a public higher education, individual benefits for students might be balanced with wider social benefits (Marginson, 2011). Criticism has been directed towards such a broad pedagogical goal, as a form of social engineering or imaginative idealism, removed from either practical or economic reality (Walker, 2010). In the face of urgent global challenges, the past decade has seen a surge of interest in ways of educating professionals with both the specialist skills and the social consciences required to contribute to society. Professional work has been conceptualised as contributing to the common good when it is excellent, ethical and engaging: excellent in quality, ethically and socially responsible, and allowing meaningful engagement for its practitioners (Gardner & Shulman, 2005, p. 17).

Over the past decade there has been an ontological turn in higher education whereby the focus has stretched beyond the development of knowledge, skills and attitudes towards a concern with who the student is becoming (Dall'Alba & Barnacle, 2007). Barnett (2004) has argued that, in the face of the super-complexities and shifting uncertainties of emerging society, a pedagogy for human being is required. Moreover, he states that to flourish as a professional in contemporary society requires an ability to stand in the world and engage with it in a purposeful and authentic manner.

Professional Capabilities, Personal Wellbeing and Social Responsibility

One feasible approach to realising the broad goals of learning for a life of rich significance draws on the functional capability approach of social economist Sen (1999) and moral philosopher Nussbaum (2011). Functional capability refers to the freedom and opportunities for people to choose directions that, for them, make life worthwhile, as well as the ability to act towards those ends. It is a philosophical approach to human development with an outcomes-focused practical intent. The capability perspective has been adapted for higher education as a way of actualising broad pedagogical goals with an ontological or socially transformative intent (Walker, McLean, Dison, & Peppin-Vaughan, 2009).

Capability research has established links between agency and wellbeing through the pivotal notion of a person's freedom of choice in taking responsibility for the planning and evaluating of a worthwhile life. Within this framework, Nussbaum (2006) articulated three key educational capabilities that support the transformation of students' lives and, potentially, of society. The first capability is the ability to lead an *examined life* that is self-aware, critically conscious and open-minded. The second is an ability to think and act as a *global citizen* with an awareness of the shared commonality of human beings. The third is the development of a *narrative imagination* that enables students to link knowledge with empathy in seeking to understand the lives of others and to envisage new or undiscovered possibilities.

Within this notion of professional capability, is there a relationship between sustaining oneself and flourishing as a professional and doing excellent professional work? Learning skills of self-sustenance is essential in managing the stresses of contemporary professional life with its many, sometimes conflicting, demands. But is caring for oneself in opposition to concern for clients and contribution to society, or are they connected? Drawing on the work of moral philosopher MacIntyre (1985), Higgins (2003) maintained that support for professionals to flourish as human beings is central to the development and sustainability of their ethical practices. Higgins (2011) argued that professional work can contribute to a personal life of rich significance and that practices that support the personal wellbeing of professionals also support them to act in responsible, ethical ways towards the public.

Professional capability and human flourishing are social as well as personal constructs. They share an ontological basis of freedom, choice and agency with a social sense of engagement, responsibility, and meaningful contribution to the world. Within the notion of capability development, individual agency is interrelated with social circumstances in making the choice to live a worthwhile life, so that although freedoms may be individually attained they are socially constituted. Human flourishing develops through self-awareness, skilful mastery and meaningful work, and the world of professional work offers opportunities for all three in abundance. A capability framework offers possibilities for consideration in exemplary PBE programs.

Developing Professional Identity

To link professional capabilities and personal wellbeing in ways that support a skilful contribution to the world, consideration must be given to who students are becoming. Through reflection, experience and dialogue in education, students can develop an awareness of who they are and of their individual strengths and abilities, cares and concerns, sensitivities and fears. A professional identity, a particular way of being a professional, is never fixed; it changes through professional life in a dialectic interchange with lifeworld experience (Dall'Alba, 2009). Despite postmodern doubt, this fluid self is anchored by some core sense of "who I am": a self-sameness that infuses becoming with continuity over time to develop a narrative sense of one's self (Ricœur, 1984/1990). In a world of uncertainty such ontological security is constantly challenged and always shifting. In many senses, being a professional remains a continually evolving state of becoming.

The notion of authenticity in professional life is commonly understood in terms of integrity, that is, alignment of values and actions. In this chapter, however, we draw on an existential notion of authenticity (Guignon, 2004a, b). Our existential dilemma as human beings is that our lives are finite. Authenticity involves recognition that the shaping of our lives, through our choices, words and actions, is ultimately our own responsibility. From an existential perspective we, as human beings, have freedom of choice, not in determining our social circumstances and

biological blueprints, but in making choices about how we respond and act within our lifeworld. Essentially authenticity is about accepting responsibility for our lives.

Professional authenticity involves a reflexive choice in making decisions about our lives in the light of social responsibilities. Becoming authentic as a professional involves facing up to situations, weighing up possible choices, with a clear sense of what is truly worth pursuing (Webster-Wright, 2010). Such a stance contributes to a professional life of rich significance.

Learning and Thriving as a Professional at Work and Through Life

How can the commitment to a rich life, to clients, to a profession, to family and community be sustained? What skills and opportunities are required for professional and personal sustenance so that professionals can continue to learn and their practice can thrive through life? Of particular importance is the capacity to deal with uncertainty and change by critically inquiring into practices in ways that refresh skills and renew engagement with the world, and by developing habits, such as mindful inquiry, that nurture professional growth.

Once students become practising professionals they find that learning at work is profoundly different from learning while enrolled in PBE-based courses. The most obvious difference between undergraduate and continuing professional learning is in the assessment of predetermined learning outcomes. Exemplary PBE curricula stress the ability to self-monitor and self-evaluate one's learning. Such curricula also stress the uncertainty and complexity of practice through engagement with real and simulated work experiences. Nevertheless, most novice professionals find the uncertain and sometimes chaotic nature of working practice to be challenging.

Learning continues as professionals begin their lives at work, but it may not be immediately recognisable as such. Research confirms that professionals learn from, in and through engaging in practice with others at work, in many different ways (Eraut, 2004; Webster-Wright, 2009). Professionals learn from client feedback, from reflection on what has not worked, from interactions with colleagues, as well as from attending seminars and discussing research. Even if continuing learning goals are well planned, in practice learning beyond graduation is neither neat nor contained, is often messy and circuitous, may take unexpected twists and turns and have no clear beginning or end.

Graduating professionals understand that they have a responsibility to continue to learn and enhance their practice as research evidence and community expectations alter over time. They know that continuing registration will be tied to evidence of continuing professional development. Unfortunately, as attendance at courses and seminars is the most visible and simplest way of demonstrating compliance with mandatory professional development, such activities gain precedence over other valuable ways of learning through practice (Boud & Hager, 2011). Support for continuing learning can be offered through local workplaces and professional organisations. Research indicates that to be effective in sustaining changes in practice, learning support needs to involve collaboration to create

trusting relationships and cultures of inquiry, and encourage continuing cycles of engagement and reflection on experience with practice problems (Penuel, Fishman, Yamaguchi, & Gallagher, 2007).

Learning to Make and Justify Professional Decisions

Being able to make informed choices and critically evaluate and justify these choices in different problem spaces is central to the development of independent professional judgement (Higgs & Jones, 2008). The development of professional judgement is a key focus of PBE curricula. Barnett (2010, p. 23) explored the complexities of competing and ambiguous priorities at work through the concept of "consideration." Practitioners need to *consider*, that is, to analytically evaluate and critically reflect on the many aspects of their practice, while being *considerate*, that is, caring for and being concerned about others involved in their practice, such as colleagues, clients and communities. Problems can arise in practice that defy purely logical decision making, particularly where ethical questions are involved, where there is a choice between competing needs, or where choices involve equally unpalatable options. Making professional judgements, in contexts of complexity where the constraints of a situation create serious doubt as to appropriate action, requires an ability to step back from practice, reflect critically on assumptions, and enter dialogue with a wider community, using professional capabilities discussed earlier.

Flexibility and openness are needed to deal with the changing complexities of everyday practice. Lives change, challenges arise and are resolved, interests and commitments alter over a lifetime. Despite attempts at envisaging the future, essentially it remains uncertain and unknown. When dealing with human beings in professional practices, "uncertainty" may not be the most useful term to use. Uncertainty implies that with more information a situation can become increasingly certain, and that is the case for many practice situations where further investigation, history or assessment is required. Often, however, *ambiguity* may a preferable term in describing work practices in PBE curricula. As an unknown and unknowable quality, ambiguity can be considered part of the very nature of being human and of practices dealing with human beings.

Mindful Inquiry in Living a Life of Rich Significance

Supporting students to become reflective practitioners has been an aim of professional education programs since Schön's (1983) breakthrough investigation of professional practice. Different interpretations of reflection have led to some confusion and a tendency for it to be referred to in a nebulous way, sometimes reduced to little more than a learning objective. Certainly reflection is considered integral to high-quality professional practice. That practice incorporates excellence in practice skills that continue to evolve, ethical and social considerations in making judgements, and meaningful engagement that sustains both professionals

and their practice. It is pivotal to the development of educational capabilities, to human flourishing and to living a richly authentic life.

Reflection is threaded throughout PBE curricula. Although reflection needs to be taught in explicit ways in the early stages of an education program, care must be taken that space is allowed in later years of education for the development of individual styles of reflective practice, rather than pre-ordained processes. All students need to develop a rigorous analytical process of examining and reflecting on clinical problems, as well as the ability to be aware of and critically evaluate their assumptions about practice in a metacognitive manner. Yet the shape of the reflective practices developed will vary among professionals, according to differing emphases placed on its critical, mindful, creative, engaged and socially situated qualities, so that reflection becomes aligned with diverse life orientations.

There is also a need for stillness and calmness in the midst of what has been described as a turbulent world of practice (Higgs, Loftus, & Trede, 2010). An ability to find stillness, from time to time, can provide some clarity about what it means to be a professional, living a life of rich significance. In a hectic life of competing priorities, can one engage in active, critical, social and interactive practice inquiry while maintaining the ability to sometimes sit with uncertainty and hold openness in inquiry through contemplative and mindful practices? Webster-Wright (2010, p. 151) used the term *mindful inquiry* in both active and receptive senses. It involves actively questioning assumptions, while listening with openness to replies. It involves both critical social dialogue and quiet thought. As a way of conceptualising professional reflection, the notion stresses the interrelationship between active questioning inquiry and receptive open mindfulness.

Professional practice calls for creativity and imagination; each client and situation is differently nuanced, their progress undetermined. The need for still, calm spaces may be just as important as collegial dialogue, although in contemporary workplaces it is sometimes difficult to establish either. In the generation of professionals emerging, advocacy for such professional self-sustenance may help support both clients and the community, as professionals are enabled to develop innovative solutions to current world problems.

CONCLUSION

We have argued in this chapter that learning for, about and through life during PBE can benefit both the individual and society; the transformation involved in becoming a professional can reverberate throughout the length and breadth of a life. Within this framework of learning for life we have discussed what might constitute a professional life of rich significance, how the development of professional capabilities might support such a life, how a stance of mindful inquiry can facilitate the continuing learning and growth of professionals through life, and the implications of such an approach for exemplary PBE curricula. In developing students' capabilities through a learning-for-life orientation in PBE, the goal is that these will be capabilities enacted and strengthened through professional life rather than swept away during immersion in the performative world of work.

A learning-for-life orientation to professional education does not seek to develop ideal human beings, but skilful and self-aware professionals, capable of stepping outside the turbulent rich lifeworld of everyday practice from time to time, to reflect on and redirect their efforts in authentic and mindful ways. Such exemplary education supports practitioners in using their skills and knowledge in practice, keeping the big picture of what matters in human lives in their minds and a sense of who they are and how they can contribute in their hearts.

Becoming me – the professional *me*
is about being me in practice
and bringing me into practice
but it is also becoming more of me
more than I am now
as I learn to be – in practice
and learn to become – through practice.
My life and self is *long and wide*
both belong in my practice
I am not *limited* by old practice words
like objective, clinical, academic
my practice is richer
by me being me.

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ALISON GATES AND JOY HIGGS

5. REALISING WISE PRACTITIONERS

Through Lifelong Practice-Based Education

This book explores exemplary practice-based education, particularly from the perspective of practitioners entering the world of practice. In this chapter we step through and then beyond professional entry education and the preparation of beginning practitioners to examine the way lifelong practice-based education can enable individuals to become wise practitioners and help educators and mentors to foster practice wisdom in their students and colleagues. We believe that wisdom has been overlooked and undervalued within higher education for some time. Within the university wisdom has lost territory to knowledge and, because of its nature as individualistic, situational and personal, it has been in the "too hard basket" with university educators. We consider that research on practice wisdom from a variety of disciplines would benefit from a return to its roots in the scholarship of wisdom more broadly. Practice-based education (PBE), when it extends to lifelong and lifewide learning, is conceptualised as a bridge to wise becoming.

WISDOM

Wisdom is highly valued by society at large. In his popular account of wisdom, Hall (2011, p. 6) asserted "we crave wisdom – worship it in others, wish it upon our children, and seek it ourselves – precisely because it will help us lead a meaningful life." But the academic view of wisdom has not been so enthusiastic. Some of the literature on wisdom focuses on its intellectual and cognitive aspects at the expense of its moral and personal dimensions (Sternberg, 1985; Dixon & Baltes, 1986; Sternberg, 1990b). Marcel (1955) even suggested that the emphasis on scientific knowledge may have led to the decline of wisdom within the Western tradition. To address this topic we start by examining what is meant by wisdom and how a fuller understanding of wisdom articulates practice wisdom more coherently.

In missing the opportunity to maintain the philosophical connection between wisdom and practice wisdom, scholars have not deeply translated ideas about educating for wisdom into the higher education context. As an individual and personal characteristic, wisdom transcends the boundaries of any particular higher education program but sits comfortably within the realm of lifelong and lifewide education (Barnett, 2011; Jackson, 2011).

Wisdom is highly individual and contextualised, and in many ways defies a reductionist attempt to observe, categorise, classify and define it. Wisdom means different things to different people, as in the old parable of the blind monks seeking to understand from varied perspectives, what this strange creature, an elephant, was (see Figure 5.1). Consider the range of definitions of wisdom found in Table 5.1.

Figure 5.1. The blind monks and the elephant[i]

Table 5.1 highlights the lack of consensus on a definition for wisdom. Indeed, a complete definition of wisdom is something of a mirage. Two insightful views in support of this point of view are:

> To understand wisdom fully and correctly probably requires more wisdom than any of us have. … The recognition that total understanding will always elude us is itself a sign of wisdom. (Sternberg, 1990a, p. 3)

> As soon as you're confronted with a definition of wisdom, however provisional or tentative, however debatable or howlingly inadequate, you are forced to view the definition through the prism of your own history and experience … We all have a working definition of wisdom floating around our heads, but we are rarely forced to consider it, or consult it, or challenge it, or amend it, much less apply any standard of wisdom to gauge our own behaviour decisions on a daily basis. (Hall, 2011, p. 10)

Nonetheless, our intention here is to make a contribution to the discussion of what (practice) wisdom is. In homage to the fabled task of labelling and interpreting an elephant, we have identified key words from the definitions in Table 5.1 and produced a word cloud shaped like the "memorable" elephant (see Figure 5.2).

Table 5.1. Definitions of wisdom (after Birren & Fisher, 1990)

Citation	Definition
Arlin, 1990	Wisdom is closely associated with *problem-finding ability,* a fundamental cognitive process of reflection and judgement.
Baltes & Smith, 1990	Wisdom is expertise in the domain of fundamental life pragmatics, such as, life planning or life review. It requires a rich factual knowledge about life matters, rich procedural knowledge about life problems, knowledge of different life contexts and values or priorities, and knowledge about the unpredictability of life.
Birren & Fisher, 1990	Wisdom is the integration of the affective, conative, and cognitive aspects of human abilities in response to life's tasks and problems.
Csikszentmihalyi & Rathunde, 1990	An evolutionary hermeneutical approach to the study of wisdom suggests that wisdom is a *holistic cognitive process,* a virtue or compelling guide for action, and a good, desirable state of being.
Kitchener & Brenner, 1990	Wisdom is an intellectual ability to be aware of the limitations of knowing and how it affects solving ill-defined problems and making judgements, characteristics of *reflective judgement.*
Meacham, 1990	Wisdom is an *awareness of the fallibility of knowing* and is a striving for a balance between knowing and doubting. Age is explicitly not a component of wisdom; in fact, one may lose it with age.
Pascual-Leone, 1990	Wisdom is a mode of symbolic processing by a highly developed will. It is a dialectical integration of all aspects of the personality, including affect, will, cognition, and life experiences.
Robinson, 1990	Provides three historical definitions: *Greek:* an intellectual, moral, practical life; a life lived in conformity with truth, beauty; *Christian:* a life lived in pursuit of divine, absolute truth; *Contemporary:* a scientific understanding of laws governing matter in motion.
Sternberg, 1990a	Wisdom is a metacognitive style plus sagacity, knowing that one does not know everything, seeking truth to the extent it is knowable.
Carr, 1995	Wisdom entails a knowledge of what is required in a particular moral situation and a willingness to act so that this knowledge can take concrete form.
Baltes & Staudinger, 2000	Wisdom is expertise in the conduct and meaning of life.
Staudinger, 2001	Wisdom is insight and knowledge about oneself and the world and sound judgement in the case of difficult life problems.
Sternberg, 2004	Wisdom is the use of intelligence and experience based on personal values to achieve good results.

Wisdom and Knowledge

There is a rather precarious relationship between wisdom and knowledge that requires careful negotiation. A valuable means of examining this question lies in the work of Aristotle (trans. 1999) who distinguished three intellectual virtues:

episteme, *techne* and *phronesis*. Flyvbjerg (2001) characterised episteme as scientific, universal, invariable, context-independent knowledge. This concept is linked to the terms epistemology and epistemic. Techne is oriented toward practical instrumental rationality governed by conscious goals and is characterised as context-dependent, pragmatic, variable, craft knowledge. This concept is linked to the terms technique, technical, and technology. Phronesis is pragmatic, variable, context-dependent, and oriented toward action; it implies ethics and involves deliberation that is based on values, informed by reflection and concerned with practical judgement.

Sternberg (2003) identified three approaches to understanding knowledge and wisdom, linked to these concepts. The first is the philosophical approach which incorporates sophia (contemplative wisdom), phronesis (practical wisdom) and episteme (knowledge of the nature of things). This historico-philosophical analysis has been further developed by Higgs (2012) who explored the nexus between knowledge and wisdom through episteme, techne and phronesis. Sternberg further suggested, "to be wise one must know what one knows, know what one does not know, know what can be known and know what cannot be known at a given time or place" (2003, p. 153).

Figure 5.2. Synonyms for (practice) wisdom.
Created using http://www.tagxedo.com

Wisdom and Embodied Knowledge/Knowing

Wisdom has often been posed as dichotomous to knowledge, as in Howie's (1985) article, "Research in general practice: Pursuit of knowledge or defence of wisdom?" The weaknesses of the abstract and theoretical approaches to wisdom are that they coagulate wisdom and knowledge in discrete bundles and pose them against each other, reinforcing the dichotomy. Breaking down the dichotomy requires a new lens for observing wisdom. One opportunity lies in taking an embodied approach to the study

and pursuit of wisdom. By this we mean that wisdom can be observed (to some extent) in the real-life decisions and actions of wise practitioners. Orwoll and Perlmutter (1990, p. 165) suggested:

> Thus far studies of wisdom have considered personality and cognitive components separately. We propose a methodology for studying them together. The main premise of this approach is that wisdom can be better understood by the intensive study of people believed to be wise. This approach should not only isolate aspects of wisdom for intra- and inter-individual comparisons but also reveal their organization and patterning within and across individuals. It directs attention more holistically to the study of people who cluster at the upper end of the continuum of wisdom instead of focusing on components and isolated variables in a wide range of individuals. Study of exceptionally wise people should provide insight into:
>
> – the nature of wisdom, including the interrelationship among various affective, cognitive, and social correlates of wisdom;
> – the development of wisdom, including life course processes and events that contribute to wisdom; and
> – the consequences of wisdom, that is, what it means to live a wise and meaningful life.

Thus the study of wisdom is enriched and informed by examining wise people and, in our case, wise practitioners. This embodied approach to wisdom is an important context from which to explore and teach wisdom in higher education.

Wisdom, Intellectual Development and Judgement

Wisdom is also understood in the context of intellectual development and the development of judgement. According to Kitchener and Brenner (1990), wisdom is an advanced stage of intellectual development. They identified four measurable aspects of wisdom connected to knowledge:

– a recognition of the presence of unavoidably difficult and complex problems that confront all adults
– a comprehensive grasp of knowledge, characterised by broad and deep understanding
– a recognition that knowledge is uncertain and that it is not possible for truth to be absolutely knowable at any given time
– a willingness and exceptional ability to formulate sound, executable judgements in the face of life's uncertainties (imperfect knowledge).

While wisdom demands rich, deep and wide knowledge, such knowledge does not fully constitute wisdom:

> The essence of wisdom … lies not in what is known but rather in the manner in which that knowledge is held and is how that knowledge is put to use. To be wise

is not to know particular facts but to know without excessive confidence or excessive cautiousness. Wisdom is thus not a belief, a value, a set of facts, a corpus of knowledge or information in some specialized area, or a set of special abilities or skills. Wisdom is an attitude taken by persons toward the beliefs, values, knowledge, information, abilities, and skills that are held, a tendency to doubt that these are necessarily true or valid and to doubt that they are an exhaustive set of those things that could be known. (Meacham, 1990, p. 187)

So the knowledge component of wisdom needs to be supplemented by discerning judgement. As Hall wrote (2011, p. 4), "one of the hallmarks of wisdom, what distinguishes it from 'mere' intelligence, is the ability to exercise good judgement in the face of imperfect knowledge." Baltes and Staudinger (2000) introduced the concept of "fundamental pragmatics" to account for knowledge and judgement combined and situated in the appropriate context. The context of wisdom (and of the wise practitioner) is vital: what is wise in one situation may be unwise in another.

Wisdom, Values and Life Learning

We argue that in order to educate for practice wisdom, we need to develop a fuller sense of wisdom itself. Many of the attributes of wisdom are also requisite for practice wisdom, and therefore to foster practice wisdom higher education needs to embrace education for wisdom more fully. To do this, wisdom must be explicit and tangible within university curricula and courses, and we argue that this follows from approaches that advance lifelong and lifewide education.

According to Baltes and Staudinger (2000, p. 122), wisdom can be evaluated using the following criteria:

– rich factual (declarative) knowledge about the fundamental pragmatics of life (practice)
– rich procedural knowledge about the fundamental pragmatics of life (practice)
– recognition and management of uncertainty
– lifespan contextualism
– relativism of values and life priorities.

All of these criteria, underpinned by the personality traits described above, are highly relevant to practice wisdom. We contend that higher education has focused on provision for the first two (possibly three) criteria, with significantly less emphasis on the latter two. The role of higher education in the promotion of wisdom for and in practice is expanded below.

Baltes and Staudinger (2000, p. 132) further asserted that wisdom is also a state of being or, as they put it, "an overall life orientation." This suggests a differentiation between momentary flashes of wisdom – the isolated wise decision or action – and the elevated state of wisdom. As the practitioner becomes wise, the "flashes" become more frequent, less surprising, to the point that for the wise practitioner they are regular, expected and innate.

THE GETTING OF WISDOM

Wisdom is a fusion of human characteristics. In any given instance, or between different individuals, the recipe for gaining or promoting wisdom is not the same. Perhaps it is this inexactness of wisdom that makes it difficult to replicate in an educational sense, and thus somewhat unpalatable or problematic for tertiary educators. Initial inspection of the terms in Figure 5.2 might reasonably result in some trepidation for the academic practitioner. These traits of wisdom may appear to be slightly outside our capability. However, wisdom is about personal growth and development and personal characteristics, and thus learning for wisdom is about education that is lifewide as well as lifelong (Barnett, 2011; Jackson, 2011).

Bassett (2005) conducted a grounded theory project involving interviews with 24 thoughtful, insightful people of public distinction and produced an emergent wisdom model that illustrates the complexity of wisdom and serves as a basis for learning to be wise. She concluded that we will never complete the cycle of becoming totally wise but can continue to see greater wisdom (see Table 5.2).

Table 5.2. The emergence of wisdom (based on Bassett, 2005, p. 7)

Dimension	Chief Characteristic	Manifestation
Discerning - Active	Objectivity	Deep understanding of fundamental patterns and relationships
Respecting - Affective	Openness	Sense of gratitude/ Expanded sphere of consideration
Engaging - Active	Involvement	Committed action for the common good
Transforming - Reflective	Self-awareness	Embracing of paradox and uncertainty/ Ability to see beyond the self/ Growing recognition of interdependence

PRACTICE WISDOM

Wisdom, then, is a nebula of attributes and characteristics: empathy, intelligence, reflectivity, competence, communication skills, big picture conceptualisation, exceptional understanding, welcoming of ambiguity, knowledge probing, highly developed personality, self-awareness, sensitivity to context, openness to change, being an advisor and a good judge (see Birren & Fisher, 1990), humility, compassion, patience (see Hall, 2011), emotional resilience, expertise, having an advanced sense of relativism, contextualism and uncertainty (see Baltes & Staudinger, 2000). When we translate the notion of wisdom into professional practice we consider the wise practitioner as enacting this nebula of attributes: to be wise in practice requires the same attributes as wisdom of a more general nature. This is not to say that the wise practitioner possesses and demonstrates all these attributes all the time, because wisdom is contextual and individualistic. However, we contend that many of these characteristics are evident in most wise practitioners most of the time. Furthermore,

wise practitioners are not always wise in a broader, lifewide sense, but the attributes of wisdom extend beyond the practice world so that if people develop these attributes and also gain knowledge and experience in life as well as in practice, they are like to be wise in both.

> Practice wisdom is the possession of practice experience and knowledge together with the ability to use them critically, intuitively and practically. Including characteristics of clarity, discernment and caring deeply from an objective stance, practice wisdom is a component of professional artistry. (Titchen & Higgs, 2001a, p. 275)

A useful way for novices and also more advanced practitioners to reflect within their practice context on what practice wisdom is and what the pursuit of wise practice entails, is to consider how these attributes can be enacted, how they are manifest in other practitioners that are considered to be wise, and how these elements comprise the experience of practice wisdom. It is a worthwhile exercise to critically appraise the definitions above in relation to the place and value of practice wisdom in the 21st century era of evidence-based practice.

Practice wisdom goes beyond technical expertise to represent the pinnacle of knowledge, judgement and decision making, within an empathic and ethical expert framework for professional practice. Being a professional requires the capacity to make decisions in the face of uncertainty when acting with humanity and competence. Indeed, to work within predetermined parameters of set evidence without exercising and taking responsibility for one's professional judgement is to take the role of a technician or junior practitioner who lacks the capacity to cope with the complexities and situatedness of professional practice. Professionals should be capable of making sound decisions and taking action that is relevant to the context of their own abilities and practice models and to the needs and contexts of their clients. Wise practitioners achieve these goals to the highest levels of performance, grounded in humanity, rich practice knowledge and a depth of practice experience that transcends textbook situations, simple client contexts and the use of commonly shared professional knowledge.

By its very nature, practice wisdom is based on an ideographic rather than a nomothetic approach, a distinction made by Nagel (1961) in relation to different approaches to knowledge building. The nomothetic seeks to establish general laws for repeatable events and processes, whereas the ideographic aims to understand the unique and the nonrecurrent.

Practice Wisdom and Professional Artistry

The traditional view of professional practice, where theory is thought to be applied to practice in a technical–rational way, has for some time been challenged by a vision of practice in which professional artistry is required to address the uncertainties inherent in practice (see Schön, 1983).

> There is an element of artistry at the heart or core of the kind of professional practice which is acknowledged to be outstanding and to which we all aspire.

This artistry encompasses but goes beyond competence and what we might describe as technical expertise. It is owned by an individual who possesses a blend of qualities built up through extensive and reflective personal knowledge and experience. It is difficult to describe and impossible to commodify … However, this professional artistry is recognised and greatly desired by others in the field, and is worthy of consideration and exploration in order to make it accessible to a greater number of people. (Beeston & Higgs, 2001, p. 108)

Della Fish used the term *professional artistry* as a means of taking a holistic view of practice-encompassing skills and also the "invisible aspects of practice, which though hidden are far more extensive that its visible elements" (Fish, 1998, p. 2). Viewed through this lens, wisdom is one invisible aspect of practice. Fish further argued that critical appreciation of these invisible aspects is essential for practice-led research and education of new practitioners. Fish contended that by sidelining the invisible aspects of practice, including wisdom, we fail to paint a full picture of professional practice in research or in education arenas. Titchen and Higgs (2001b) proposed that professional agency is epitomised in three practice dimensions: professional artistry, practice wisdom and professional expertise.

Practice Wisdom and Professional Judgement

Scott (1990) related the terms practice wisdom and professional judgement, seeing these capabilities as essential to professional practice. Fish and Higgs (2008, p. 21) argued that the role of practitioners:

as responsible members of a profession, … is precisely to argue their moral position, utilise their abilities to wear an appropriate variety of hats on different occasions with proper transparency and integrity, and exercise their clinical thinking and professional judgement in the service of different individuals, while making wise decisions about the relationship between individuals' privacy and the common good.

Wisdom is not transferable: what is wise in one situation is not necessarily wise in another. Nor is the wise practitioner infallibly wise. We have already presented wisdom as being situated, contextual and individualistic, and this poses challenges for educators and presents potential lessons for higher education.

LESSONS FOR HIGHER EDUCATION

Teaching for wisdom in higher education means guiding students to develop their own sense of what wisdom is and what its value is for them, their work and their professional futures. Attaining wisdom is a lifetime project which should begin in an education system that acknowledges the ancient goal of human wholeness (Miller, 2006, p. 154). For higher education this argument entails curricula that address the whole person, not just the knowledge or skills of the course discipline.

Part of this wholistic approach is the role of learners in directing and evaluating their own learning. Learning to be reflective is a key element of gaining both wisdom and

the capacity to pursue it. These attributes enable learners to identify opportunities for understanding and gaining wisdom, make the most of their learning experiences, and recognise manifestations of wisdom in themselves and others. Wisdom can be fostered and enriched through the depth and breadth of learning and practice experiences encountered. This leads us to a consideration of the value of PBE during university education, particularly workplace learning, as well as practice experiences after graduation.

PBE AS A BRIDGE TO PRACTICE WISDOM

"PBE refers to grounding education in goals, content and strategies that direct students' learning towards preparation for practice roles post graduation" (Higgs, 2011a, p. 2). PBE is a whole-of-curriculum approach, a pedagogical perspective and a set of pedagogical practices (including supervised workplace learning, simulations, blended learning strategies) (Higgs, 2011b). In this view, pedagogy "comprises a social practice that seeks to promote the educational development of individuals, as framed by perspectives, models or theories of education and encompasses interactive philosophical, political, moral, technical and practical dimensions" (2011b, p. 2).

These goals reflect not only the direct intention of promoting practice wisdom but also the features of wisdom discussed above: citizenship, ethical practice, a range of ways of knowing, embodying ethical practice and the capacity to generate knowledge. Thus we see that PBE provides a bridge between wisdom principles and manifestations, within the context of professional education.

A useful starting point for planning PBE experiences is provided by the work of Sternberg and colleagues (Sternberg, 2003; Sternberg, Reznitskaya, & Jarvin, 2007; Sternberg, Jarvin, & Grigorenko, 2009) concerning principles of teaching for wisdom in schools. Table 5.3 provides examples of PBE teaching and learning strategies building on these principles. Some key considerations in designing these strategies include:

– recognising that practice experience without reflection is not sufficient to achieve learning or practice wisdom
– grounding the learning content and activities in the context of the learner's or practitioner's practice
– building the capability for self-generation of wisdom as well as demonstrating or facilitating wisdom
– providing role models who embody and can articulate practice wisdom
– seeking practice wisdom and encouraging learners to seek it from a range of sources, across ages, genders, disciplines, professions and clients/mentors. As Hall (2011, p. 14) put it, "we need to be a little more catholic in where we look for, and are willing to find, wisdom."

Table 5.3. Translating principles for teaching wisdom into PBE strategies

Sternberg's 16 Principles of Teaching for Wisdom in Schools	PBE Goals and Strategies (Examples)
Explore with students the notion that conventional abilities and achievements are not enough for a satisfying life.	Promote reflection on developing practice goals and models, encompassing but extending typical practice knowledge and competencies.
Demonstrate how wisdom is critical for a satisfying life. In the long run, wise decisions benefit people in ways that foolish decisions never do.	Review the place of judgement in professional practice and the links between judgement and wisdom. Talk with professional role models about the wisdom underpinning their practice.
Teach students the usefulness of interdependence.	Explore teamwork in practice settings and discuss how collaborative practice exceeds the benefits of individual practice.
Role-model wisdom because what you do is more important than what you say. Wisdom is action dependent and wise actions need to be demonstrated.	Teachers, workplace learning educators and practice mentors should model practice wisdom and spend time explaining the basis for their practice actions, articulating wisdom.
Have students read about wise judgements and decision making so that they understand that such means of judging and decision making exist.	In tutorials, online learning and workplace learning consider the nature and practice of professional decision making. Critically appraise and compare expert, wise judgements to novices' judgements.
Help students learn to recognise their own interests, those of other people, and those of institutions.	Learn about interests and motivations (see Habermas' (1968/1972) technical, pragmatic and emancipatory interests) and their application to professional practice. Explore these interests in group discussions and workplace practice.
Help students learn to balance their own interests, those of other people, and those of institutions.	
Teach students that the "means" by which the end is obtained matter, not just the end.	In workplace practice, explore with mentors and educators what paths/strategies were implemented and what outcomes eventuated. Discuss alternative strategies that could have been adopted and the possible impact on outcomes. Examine the wisdom of the choices.
Wise judgements are dependent in part on selecting among these environmental responses.	
Encourage students to critique, and integrate their values in their thinking.	In tutorials in classrooms and during workplace discussions, invite students to reflect on how their values influence their professional thinking and actions. Ask them to consider how their decisions and the factors influencing them might have changed over time and how different or multiple perspectives can influence practice decisions and actions. Have students role-play taking opposite or alternative points of view and reflect upon how this can impact on choices and actions.
Encourage students to think dialectically, realising that both questions and their answers evolve.	
Show students the importance of dialogical thinking, to understand interests from multiple points of view.	
Teach students to monitor events in their lives and their own thought processes about these events. Recognise others' and own interests.	

Table 5.3. (continued)

Teach students to search for and then try to reach the common good—a good where everyone wins, not only those with whom one identifies.	Provide assignments where students explore own and common interests and critique the benefits of both, in consideration of the common good and ethical practice. Organise a student debate about the concepts of ethical practice in relation to individual and shared benefits/interests.
Help students understand the importance of avoiding pressures of unbalanced self or group interests.	
Encourage and reward wisdom.	Recognise and acknowledge practice wisdom in mentors, peers and novices in practice settings.

For graduates working in practice, many of the strategies from Table 5.3 can be modified or extended. It is worth noting that prior to graduation higher education has the opportunity to shape students' attitudes towards practice wisdom (in comparison, for instance, to propositional knowledge in an evidence-based practice framework) and promote the development of wise strategies (including reflection, self-critique and critique of practice frameworks). After graduation and throughout their professional careers, graduates' experience and practice knowledge can mature into practice wisdom. Or it might not. Wisdom is more about depth of understanding than duration.

CONCLUSION

This chapter stakes a claim for promoting practice wisdom in the territory of professional and PBE. Wisdom has been sidelined and devalued because of inherent difficulties in teaching for wisdom and also in the light of the dominance of propositional and empirical evidenced-based practice. We have drawn from literature on wisdom and teaching for wisdom to reflect on strategies for teaching for wisdom in higher education. We consider that lifelong and lifewide PBE forms a bridge between principles and manifestations of wisdom in practitioners.

PBE, we believe, is an ideal domain for teaching for wisdom, just as practice wisdom should be an aspiration, if not an attribute, of the professional-in-practice. Making wisdom explicit in PBE pedagogies and curricula provides a scaffold for lifelong learning, by unveiling for the learner and practitioner the extent of what is unknown, and creating visions for what can be pursued and understood.

NOTES

[i]   This is a free image available through wikimedia.
       http://en.wikipedia.org/wiki/File:Blind_monks_examining_an_elephant.jpg

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6. PRACTICE-BASED EDUCATION

Joining Multiple Communities of Practice

In preparing graduates for practice a key goal is to facilitate their understanding of and readiness to enter the many communities of practice they will encounter in graduate practice. Practice-based education "refers to grounding education in strategies, content and goals that direct students' learning towards practice roles post graduation" (EFPI, 2010). The focus of this chapter is the fundamental importance to practice of working and collaborating with others. Practitioners work with colleagues not only within their own profession but also across professional boundaries. For example, members of the police force work closely with people from many occupational groups including ambulance and hospital emergency departments, social services, education systems, government departments and the legal system.

This chapter explores how people need to first join communities of practice in order to participate in them and how such joining can be facilitated. It draws on Anne Croker's (2011) doctoral research and research collaboration with Franziska Trede and Joy Higgs (Croker, Trede, & Higgs, 2012) that explored experiences of joining and collaborating in rehabilitation teams. From this research we present a set of key endeavours and reviewing behaviours that are integral to joining and participating in communities of practice. We draw these findings into a view of practice-based education as one that provides pedagogical spaces for entering and engaging with different communities of practice.

OVERVIEW OF COMMUNITIES OF PRACTICE

The term *communities of practice* was coined by Lave and Wenger (1991) to describe a theory of social learning, one that places "learning in the context of our lived experience of participation in the world" (Wenger, 1998, p. 3) (see further discussions in chapter 4). Underpinning this theory are four articulated premises: (i) that people are social beings, (ii) that knowledge occurs in relation to valued enterprises, (iii) that knowing results from participating and pursuing ability in these enterprises, and (iv) that learning produces meaningful knowledge. Although these premises have been critiqued and expanded they make a firm connection between social practice and learning by framing learning as social and relational participation (Hughes, Jewson, & Unwin, 2007). In acknowledging the ubiquitous nature of communities of practice, Wenger (1998) sought to overcome the

"forgotten familiarity of obviousness" (p. 7) that can lead us to overlook the ongoing learning we do while working with others.

Fundamental to learning within communities of practice are the concepts of *situated learning* and *legitimate peripheral participation*. Situated learning recognises learning as part of an activity in the world and places emphasis on

> comprehensive understanding involving the whole person rather than "receiving" a body of factual knowledge about the world; on activity in and with the world; and on the view that agent, activity, and the world mutually constitute each other. (Lave & Wenger, 1991, p. 33)

Legitimate peripheral participation relates to the contention that learning through activity happens legitimately from the periphery towards the core of the community of practice, as newcomers "make the culture of the practice theirs" (Lave & Wenger, 1991, p. 95). Such participation frames the transformation of newcomers to the community of practice to becoming full practitioners who are agents of action and integral to the maturing of the field of practice (Lave & Wenger, 1991).

At any given time people can be members of several communities of practice with different levels of involvement (peripheral and core) in these various communities. Their participation in any community can vary over time as people move from being inexperienced newcomers on the periphery to the more experienced practitioners at the core. Communities of practice are fluid and flexible as people come and go, and as they become more or less central to the practice of the group. Some communities of practice are formally instigated and managed; others are more evolving and organic, developing shared purposes based on interests or passions.

Scenario 1 provides an illustration of participation in multiple communities of practice. Integral to such participation is the capability to develop a different sense of belonging and relationship with each community, to move between different areas of shared interests and to work with different bodies of knowledge, stories, cases, tools, and documents (based on Wenger, McDermott, & Snyder, 2002).

Scenario 1. Picture of participation in multiple communities of practice (modelled on Wenger et al., 2002, pp. 4-5)

> In this group? We don't necessarily work together every day, but it is really valuable when we do. When we see each other face-to-face we catch up with each other, help solve our individual and collective problems as well as share information, insights, and advice. And there are other groups of people I also work and learn with. Some intersect with each other but others are quite separate. Although the groups mostly involve face-to-face get-togethers, we do use texts, email and Internet chat. One group is quite pragmatic and we have concrete outcomes: for example, we have created manuals, and other documents. In another group we discuss our aspirations and ponder common issues, explore ideas, and act as sounding boards for each other.

In some of groups I feel as though I am core to the group. In one particular group I have an organising, leadership role. I was the instigator of that group and want to make sure it remains viable as people come and go and our situations and needs evolve. But in others, particularly where I am a newcomer, I feel as though I am more on the periphery and that is fine; it doesn't have to be the same for all groups. And I am not the only one on the edge; there are others who come and go, with some never really feeling core to the group, but still contributing and learning on the periphery. However, common to all the groups is that we have a sense of shared interest or purpose, an ongoing accumulation of knowledge and the valuing of the way we learn together. Our involvement is more than just getting our work done; it also relates to the personal satisfaction of knowing each other, of understanding each other's perspectives and of belonging. Over time, and particularly in long-standing groups, we have developed our own unique perspectives on particular topics as well as a body of common knowledge, practices, and approaches in each group. We have also developed personal relationships and established ways of interacting. People joining our groups feel as though there is something to join. I belong to multiple communities of practice; they are all different.

PRACTISING COLLABORATIVELY WITH OTHER PROFESSIONS

With many concerns in workplaces being beyond the scope of one particular profession, there is increasing recognition of the importance of encouraging different professions to learn and practise together. This is evidenced by the vast literature on teamwork and interprofessional collaboration (e.g. Mickan, 2005; Hammick, Freeth, Koppel, Reeves, & Barr, 2007; Health Professions Network Nursing and Midwifery, 2010). Communities of practice provide opportunities for practitioners to learn collaboratively with each other. These learning opportunities may be in conjunction with or beyond explicit interprofessional education strategies (such as shared learning sessions and simulated situations aimed at exploring different role contributions and understandings) and may be threaded throughout and across easily identified organisational structures (such as departments and teams) as well as more informal networks (such as transient task groups).

A community of practice framework was identified in Anne's doctoral research into rehabilitation teams in health care as appropriate for conceptualising the often complex, fluid and ambiguous nature of teams in practice (Croker, 2011). In particular, community of practice characteristics of shared interest, sense of belonging and the development of a body of knowledge were all integral to the research participants' experiences of collaborating. Communities of practice are becoming recognised as a valuable means of conceptualising clinical and workplace learning (Egan & Jaye, 2009; Sheehan, 2011).

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Using "Communities of Practice" to Frame Understanding of Team Complexity

Teams in practice are often more complex than indicated in organisational and teamwork literature. In the literature, health care and rehabilitation teams are often presented as concrete entities with stable structures and clear memberships. For example, a rehabilitation team might be defined as people from a range of different disciplines (including medicine, nursing, physiotherapy, occupational therapy, speech pathology and social work) working together to provide rehabilitation for individuals with neuromuscular or musculoskeletal conditions. In practice, however, who, how, when and where people work together is much more ambiguous and messy than implied by this definition.

In Anne's research, teams did not always have clear boundaries or membership. Rather, they were often best understood as being composed of multiple communities of practice (some intersecting within the team and others extending outside it). Team members described varied types of teams: some were clearly delineated entities, others were diffuse with no readily discernible boundaries.

Team members were also members of other teams. Anne's research highlighted the usefulness of the idea of "communities of practice" for conceptualising the complexity of team structures and interactions. Rather than seeking to understand "where and what the team is," the team can be better represented by a number of communities of practice, overlaid on and supported by organisational processes (such as meetings and shared spaces). This representation highlights the need to prepare students for structured, visible and systematic interactions of working in stable delineated teams, as well as the capability for joining and practising within the fluidity and complexity of different levels of engagement in several communities of practice.

Collaborating in Communities of Practice

Students are not necessarily capable of joining and participating equally in multiple communities of practice during practice-based education. Despite widespread support for interprofessional collaboration and teamwork, and the community of practice premise that people are social beings, people do not necessarily have similar capability for collaborating with others; some are more difficult to work with than others. Anecdotally, there are many shared frustrations of having to work with "tricky" or "prickly" people. Institutions and trainers often run courses on "dealing with difficult people." Linden (2010, p. xxiii) included in his notion of *difficult people to collaborate with*, those with "silo" mentalities, the "800-pound gorillas" who accumulate power and share nothing, and perfectionists.

So it is rather optimistic for educators to assume that newcomers to the workplace will "just know" how to join communities of practice (and teams) and participate in shared practice. Students in particular could well need to be prepared for and ready to deal with the complexity of working with others, especially for collaborating with people from different professions (with different socialised ways

of knowing and doing) and with people with a range of abilities and interpersonal communication.

Through researching people's experiences of collaborating, Anne identified key *endeavours* (Es) and *reviewing behaviours* (Rs) that are integral to successfully joining and participating within interprofessional communities of practice. These are outlined in Figure 6.1. Examples of how the Es (*engaging, entering, establishing, envisioning* and *effecting*) and the Rs (*reflexivity, reciprocity* and *responsiveness*) facilitate the joining of a community of practice are described below. These *endeavours* and *reviewing behaviours* can provide a framework to help students before and during practice-based education (i) to inform their expectations for interprofessional practice in a range of communities of practice, and (ii) to guide the development of their capability for joining and participating in communities of practice. The reviewing behaviours also provide insights for understanding different people's different capabilities for working with others in both practice and education situations.
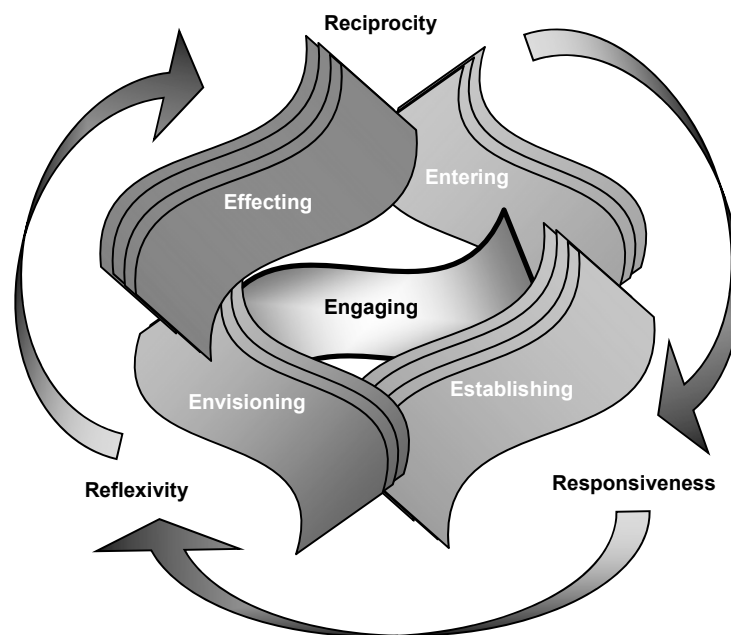

Figure 6.1. Endeavours (Es) and reviewing behaviours (Rs)
that are integral to joining and participating in a community of practice.
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Engaging positively with others' diversity is core to other endeavours. It relates primarily to the positioning of self in relation to others; being positively attuned to others. This endeavour reflects practitioners' openness

to each other's different perspectives and skills, as well as their goodwill and respect for others.

Entering into the feel and form of a community of practice relates to newcomers' sense making of the collective's expectations, and experienced members' judgements of newcomers' capabilities. For some people, entering a community of practice is a gradual process, whereas for others it is more abrupt.

Establishing ways of communicating and working together focuses on the complex nature of interactions with others. This endeavour requires intertwining a range of formal and informal systems of communication and adjusting to others' ways of working.

Envisioning together future directions addresses the community of practice's shared purpose; for example, what is being sought through patients' rehabilitation and how it would be done. This endeavour involves accessing and developing the collective knowledge of the community of practice.

Effecting changes relates to the ongoing relevance and viability of the community of practice. This endeavour acknowledges the influences of organisational contexts on shared practice.

Reflexivity, which involves critical reflection and development of self in relation to others, is evident in people's abilities to reflect on and monitor their own actions.

Reciprocity, which facilitates mutuality of roles within the community of practice, underpins the shared practice and is inherent in people's goodwill to others.

Responsiveness, which facilitates situationally appropriate and contextually relevant adjustments, is implicit in the constant modifications that community of practice members make to their interactions as they deal with changes, unpredictability and uncertainty.

Joining Communities of Practice: Engaging, Entering and Establishing

The complexity of beginnings in communities of practice is highlighted by the endeavours of *engaging, entering* and *establishing*. It is these beginnings that shape ongoing participation in shared practice. As well as needing to be attitudinally ready for shared practice, newcomers need to be able to negotiate and understand the nature of each community of practice they join before they can come to participate fully. The notion of shared purpose is an important impetus for driving these dimensions.

Joining a community of practice requires more than just "turning up" (for example, attending a team meeting). Really *joining* involves a commitment to **engage** *with others people's diversity* as they collaborate for a shared purpose:

> You know [we] are just so completely different, we're not different with regards to ideals. But [also] in terms of our personalities, the way we get jobs done, agendas, all different. And I think that's fantastic.

Trust and respect for *people* is important for this dimension, but in some cases these have to be earned.

> I think respect has to be earned, in that there is the obvious respect that you have for every human being and every person within their role. But to really trust someone and really respect their position or their job or their professional abilities or their social skills obviously you need to get to know them and observe how they work.

On ***entering*** *the form and feel* of the community of practice, newcomers in Anne's research reported that they had different opportunities to develop understandings of what it was like. For some, a lengthy orientation was provided; others needed to be self-reliant. As no communities of practice are identical, the newcomers needed to work out how each operated before they could participate fully.

> In those early stages you're kind of gauging who does what and what the local culture is.

As the newcomers sought to understand the nature of their community of practice, they often felt a simultaneous need to prove themselves to others in terms of their contribution to the collaboration's shared purpose. Acceptance was not a given:

> I guess you feel like you're being judged.

During ***establishing*** *ways of communicating and working together* in Anne's study, co-location was viewed positively due to the opportunities available to develop relationships and for informal interactions:

> I think that [being in the same location] is pretty much what makes it work actually; the fact that we do all work within close proximity of one and other. There's a lot of informal contact between people. Everyone has morning tea in the same room and lunch in the same room. And it's not far to walk to one another's offices.

Although formal systems for communication (such as scheduled meetings and record keeping) were important, the flexibility and nuances of spontaneous and opportunistic means of communication enabled interactions to be more interpersonal and immediately responsive.

Participating in Communities of Practice: Envisioning and Effecting

While *engaging, entering* and *establishing* serve to frame people's beginnings in communities of practice, the endeavours of ***envisioning*** and ***effecting*** are concerned with the *doing* of shared practice. These endeavours are fuelled by shared purpose. *Envisioning together future directions* was not perceived by the

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participants in Anne's study to be "an exact science." Rather, it involved uncertainties, drew on judgements, relied on the understandings and connections developed between others (as described in the dimensions of *engaging, easing* and *establishing*). People contributed their own perspectives and listened to the views of others.

> [Through our meetings] we've got these regular opportunities to have input and people are listened to. […] I feel it works well.

Resolving differences between perspectives generated robust understandings of the issues being discussed. Individuals gleaned insights and developed new understandings from having their points of view challenged by others' different perspectives. From these challenges, frameworks for future directions were negotiated and realigned. At times, however, conflicts between loyalties to different communities of practice needed to be resolved.

> If you asked us where our loyalty lay first, I would have to say [those of us in the same profession] would stick together.

Effecting changes relates to ensuring the efficacy and viability of communities of practice. At times participants in Anne's study needed to explicitly develop and sustain their communities of practice. Communities of practice did not exist in contextual vacuums.

> I think sometimes [the community of practice] is probably influenced by things outside of our control.

Obligatory requirements from their wider structural and organisational environments did not necessarily assist the shared nature of the practice nor contribute to their sense of *togetherness*. Shared practice could be affected in unexpected ways by changes to the environments of the practice communities. For example, a simple change of desk impeded the flow of communication:

> We just had the refurbishment here and there was an offer of rather a flashy desk. […]. I was very keen that we had it. We tried it and it was awful. [Now] all we've got in there at the moment is an old desk, but we can sit round it, and we do. And we talk and it's set up well so that we just communicate all the time.

Communities of practice are not static entities. Care needs to be taken to cultivate and sustain communities of practice to ensure effective shared practice towards their shared purposes.

Reviewing Behaviours of Collaborating: Reflexivity, Reciprocity and Responsiveness

Threaded throughout the *endeavour* dimensions of collaborating (*engaging, entering, establishing, envisioning* and *effecting*) Anne recognised three reviewing behaviours (*reflexivity, reciprocity* and *responsiveness*). She identified that people could vary considerably in their ability to review their own behaviour and that of

others. Some people are unable to embrace and work effectively within the uncertainties and ambiguities of shared practice and can appear rigid, uninterested, and self-centred, with lack of awareness of how others might see them. One of the strategies that some people with low levels of *reflexivity, reciprocity* and *responsiveness* develop within their communities of practice is adherence to set roles with little scope for negotiation or discussion about them. Even when collaboration between roles is required, they tend to communicate outcomes of decisions rather than seeking to involve others in decision making. Those with low levels of *reflexivity, reciprocity* and *responsiveness* in communities of practice can be perceived by others as difficult people to work with. In order to fulfil the aims of the community of practice, their co-workers need to "tread carefully" with them, plan what to say and how to say it.

Of particular interest to interprofessional collaboration in communities of practice is that people with low levels of *reflexivity, reciprocity* and *responsiveness* can be unaware of their limited ability to work collaboratively with others. This finding presents a paradox: people need to be reflexive in order to understand that they do not demonstrate high levels of *reflexivity, reciprocity* and *responsiveness*, yet such reflexivity would (hopefully) make them more self-aware and would overcome the problem. The implications of this paradox are frustration for others when dealing with people with low levels of reviewing behaviours, and a reliance on those with higher levels of these dimensions to manage some of the more complex aspects of shared practice.

CHALLENGES IN PRACTICE-BASED EDUCATION

The challenges and implications for practice-based education arising from Anne's research are manifold. Joining multiple communities of practice can neither be taught nor mastered. Textbooks cannot sufficiently capture the uncertain, diverse and complex nature of practice knowledge that enables participation in shared or interprofessional practice. Collaborating, joining, participating and reviewing membership of multiple communities of practice are developmental processes of unlearning, learning and relearning that involve self and others at various levels of self (and other) awareness, engagement and reflexivity. Joining several communities of practice is an ongoing learning journey for practitioners and students alike. It requires a supportive work environment and active participation from all involved: educators, students, practitioners and managers.

As discussed above, the notion and practice of teams and communities, while apparently harmonious and positive social constructs, are often much more challenging and in need of problematising. The contemporary workforce is increasingly diverse and mobile. Workplaces do not automatically provide safe and constructive learning and induction environments for students, novice practitioners and even experienced newcomers. In workplace learning situations, for instance, practitioners can be required to work with students, a role they might welcome, loathe, or even resist. Students join teams from the periphery, and their proximal progression is dependent not entirely on their own initiative but also on the

endeavours of others to help students engage, enter, establish, and envision future participation. This requires considerable student self-awareness and awareness of how they think they are perceived and received by others.

Joining communities of practice cannot be avoided. As learners, students are likely to participate in a number of communities of practice during workplace learning experiences. For example, during rehabilitation clinical placements, students need to learn the unwritten rules of contributing to discussion of patients' goals at weekly case conferences, to develop relationships with different networks of staff and carers looking after each particular patient, to contribute to other weekly meetings of practitioner collectives, and to participate in their discipline department's supervisory groups.

The unequal power relations between students and practitioners can inhibit joining and participating in communities of practice (Fuller, 2007). Prior experiences also shape engagements with teams and workplace environments greatly shape student experiences of joining teams. When there is high challenge to students' capacity or opportunity to join or work in teams, high support from educators and the system is needed to help students engage productively in the practice community and make meaning of their experiences.

Learning to join multiple community memberships means engaging with the relational, emotional and political dimensions of practice. Students might not initially appreciate the importance of engaging and recognising that professional practice is a social practice until they gain more experience and are fully responsible participants of a practice. This is further complicated by assessment regimens that often focus on profession-based technical competencies rather than more social capabilities such as working in communities of practice. The challenge for practice-based education is to develop skilled formative assessment practices that constructively help students learn how to join communities.

To use the findings of this research to help students learn how to join (multiple) practice communities we provide the following recommendations:

– Educators can thoughtfully facilitate learning from experiences of joining and starting participation in communities of practice. A good start is to prepare students for participation in shared practice by orientating them to how the team works and helping them to explore self in relation to others. Students also need to be guided to appreciate diversity in the workforce and how to respond and engage with it. A self-absorbed focus on skill and knowledge acquisition is unlikely to promote success in joining teams.

– Students need to be prepared for the uncertain and unforeseen aspects of practice that they will encounter in workplaces. One way to frame this uncertainty is to help them to recognise that their entry-level education is just a starting point for lifelong and lifewide ongoing learning, and that it is useful to develop their learning and professional capability, not just a set of current competencies and knowledge. The notion of capability refers to "an integration of knowledge, skills and personal qualities used effectively and appropriately in response to varied, familiar and unfamiliar circumstances" (Stephenson, 1994, p. 3). Capability encompasses many of the endeavour and reviewing behaviours

discussed above, and includes being self-aware and considerate of others and contributing meaningfully to the team.

– Students need to actively persist in gaining deeper understanding from joining multiple communities of practice. That is no easy task, especially when students are preoccupied with their immediate concerns such as skills acquisition, workload management and success in their assessments, and their more long-term goals such as professional identity development. They might not yet appreciate the importance of widening their practice knowledge to become effective interprofessional practitioners, a goal that is complicated by simultaneously having to navigate across various professional and team boundaries. It is not enough to prepare students for one type of practice community. Rather, they need to be able to participate in many different types of communities of practice. Students need to actively seek and identify shared practice that is beyond "official" team structure and processes. They also need to begin the transition from the periphery to the core of already established communities of practice.

– The key to learning how to join and participate in communities of practice lies in cultivating reflective dialogues. Students need to appreciate the connection between joining and learning to participate in relational social practice. Making meaning of relational practice experiences helps students to understand self and the behaviours of others.

CONCLUSION

The predominant view of collaboration and interdisciplinary practice as occurring within delineated teams runs the risk of overlooking the complexity of shared practice and opportunities for interdisciplinary learning through complex and various communities of practice, both formal and informal. Explicitly preparing and supporting students to join and participate in interprofessional communities of practice and to reflect on their learning from these experiences can help them to optimise practice-based education and workplace learning experiences. When viewed through a lens of communities of practice our workplaces are replete with opportunities for learning through shared practice. Some communities of practice (such as informal work and study groups) may be self-initiated; others (such as long-term formal work groups) are well established and students join them "on the run," like cyclists entering a moving peloton. We conclude that the first step in joining communities of practice is to help students become more aware of and sensitive to the diverse constellations and complex dynamics of human relations. To maximise these diverse opportunities for shared practice, students need to be able to understand, recognise and learn how to join communities of practice. Practice-based education that focuses on realising the capability to see and join communities of practice will enhance opportunities for lifelong learning.

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7. LEARNING FOR PRACTICE

> In spite of the importance of both theory and practice, professions are not simply conduits for taking knowledge from the academy and applying it to the field. The process of judgment intervenes between knowledge and application. Human judgment intervenes between knowledge and application. Human judgment creates bridges between universal terms of theory and the gritty particularities of situated practice. And human judgment always incorporates both technical and moral elements, negotiating between the general and the specific, as well as between the ideal and the feasible. (Shulman, 2004, p. 534)

Shulman (2004) summarised well here the challenges of professional education in preparing graduates who know, apply, think, render judgement and are able to manage the uncertainty of practice. We are constantly challenged in education by a system that tends to favour emphasis on certainty and measures of accountability. Yet we know that the academic knowledge base is important but not sufficient for practice. It is learning for practice and learning from experience that makes all the difference in professional education. In this chapter we focus on three dimensions of this central concept, *learning FOR practice*: (1) learning to blend both analytical and narrative thinking, (2) learning pedagogies – disciplinary and collaborative, and (3) learning as a way of being – the critical role of moral courage.

LEARNING FOR PRACTICE: BLENDING ANALYTICAL AND NARRATIVE THINKING

Learning in Professional Education

One of the most characteristic things about human beings is that they learn (Bruner, 1990). Learning for practice begins when the student enters a professional education program. Learning is defined as the knowledge acquired by the systematic study in any field of scholarly application, the act or process of acquiring knowledge or skill, and the modification of behaviour through practice, training, or experience (Merriam-Webster's Dictionary, 2012). Professional schools are generally found in university settings where emphasis is on professional preparation led by faculty who must function and adhere to the standards of a university academic setting. Professions are well known for their focused, specialised education that is a required portal to the profession and for the tight linkages that exist between education, accreditation and licensure.

Sullivan (2005) argued that one of the greatest challenges for professional education is how to teach the core components that every professional needs, analytical thinking, skilful practice and *wise judgement*. Although the university setting is well known for facilitating analytical habits of mind, it does far less to facilitate developing the capacity for professional judgement.

Bruner (1990) claimed that modern societies depend on two broadly different types of thinking that do not easily fit together – analytical and narrative. Analytical thinking is where one is looking systematically for patterns, for cause and effect, and is often the domain of science and technology, whereas narrative thinking is where events have significance because of a broader story or context of meaningful interaction. Professionals need to be able to blend the analytical approach with a more narrative approach or clinical habit of mind, where they can explore and make sense of situations (Sullivan & Rosin, 2008; Jensen, 2011).

Most academic institutions would identify critical thinking as one of their outcomes. Certainly critical analysis is an essential element in preparing professionals, but it is insufficient when a professional must render a practical judgement that requires not only critically analysing the situation, applying knowledge and principles, but also understanding the values that are involved, the perspectives and meanings held by the various stakeholders.

The blending of these ways of thinking is a major pedagogical challenge in professional education and even in higher education in general. There are many explicit and implicit messages that are part of our everyday culture in professional education.

- Often our professional students move as fast as they can through undergraduate courses in the liberal arts or humanities so they can get on with courses that really matter, the professional applied courses where they see the direct application of skills and knowledge to practice.
- With an increasing number of applicants for professional programs, there is a tendency to focus on more quantitative achievement measures that often favour student achievement in the science and technical courses over the humanities.
- Faculty curriculum discussions about course credits and programmatic emphasis usually view the foundation science courses as essential, tough, and predictive of student success, in contrast to the behavioural sciences or more humanistic components of the curriculum.
- When it comes to assessment of student learning and performance, assessments generally favour objective measures of performance such as multiple choice examinations over other assessments such as engaging students in self-assessments, creative work or narrative case creation.

Teaching for Certainty and Uncertainty

We live in an era where accountability pressure on all educational systems is strong. Education has long suffered from an emphasis on education as "technology," even in the generation of behavioural objectives, where one is systematically linking the prescribed means to defined ends (Eisner, 1994).

Although these behavioural objectives work well for performance where the standards can be specified in a rational, linear fashion, qualities that we look for in creating an argument or interpreting evidence in making a judgement are far more difficult to measure with standards.

Dewey (1934) argued that we often fail to distinguish between the application of a standard and the making of a judgement. Like objectives, standards lend themselves to physical conditions and quantities, but not in situations where one needs to make a judgement about the quality of work or the soundness of an argument. In professional education, students are not simply learning to apply knowledge and skill to practise but also to make judgements, often in uncertain conditions.

Students and faculty alike have a great deal of experience throughout their educational careers in focusing on certainty and finding the one right answer. Donald Schön (1983, 1987) is well known for his criticism of professional education, when he observed that professional education was too focused on technical rationality and theoretical knowledge, yet when it comes to practise, professionals often work in what he described as the "swampy lowland" of practice, where the knowledge from the academy did not directly apply to practice.

Critical thinking, as an analysis process that develops general propositions and patterns of argument, and weighs positive and negative evidence, is important in developing clinical judgement skills. It is, however, insufficient for approaching situations that are complex and uncertain (Sullivan & Rosin, 2008). In these complex and uncertain situations, it is the learners' reflective ability to understand the context, identify what values may be at risk, and understand the meanings that others see in the situation, that is critical in the judgement process. Here we can ask ourselves, do we engage learners in questions that do not always focus on the right answer but also may focus on the learner's struggle or difficulty?

− What did you have to do differently from what you planned?
− Where did you struggle most with this case or situation?
− What was the most challenging aspect of your performance?

Asking these kinds of questions about what did not go well or where you were uncertain provides students an opportunity as well as permission to learn from their experience. Shulman (2004) proposed this "table of learning" as a taxonomy that reflects a highly integrated vision of learning and a useful tool that applies to both liberal and professional education (see Figure 7.1.) He saw this taxonomy as a conceptual tool that one can play with in thinking more deeply about learning. In this taxonomy, whereas *understanding* is a concept we spend a great deal of time emphasising, it is student *engagement*, not just motivation, that leads to knowledge and understanding.

When learners understand, they become capable of performance or practice, but it is the *action* that can make a difference in the world. Action without reflection is unlikely to result in learning; it is c*ritical reflection* on one's practice or performance that results in learning. This critical reflection leads to higher order thinking or the capacity to exercise *judgement* in the *face of uncertainty* and to

create *designs* in the presence of unpredictability. Finally, there is *commitment* that comes as we internalise values, develop character and commit to making these values and principles our own, connecting inwardly and outwardly. Commitment in turn should lead to further engagements and new understandings.

> The greatest challenge for professional learning is that experience occurs where design and intention collide with chance. Without the violation of expectations, it is impossible to learn from experience. (Shulman, 2004, p. 535)
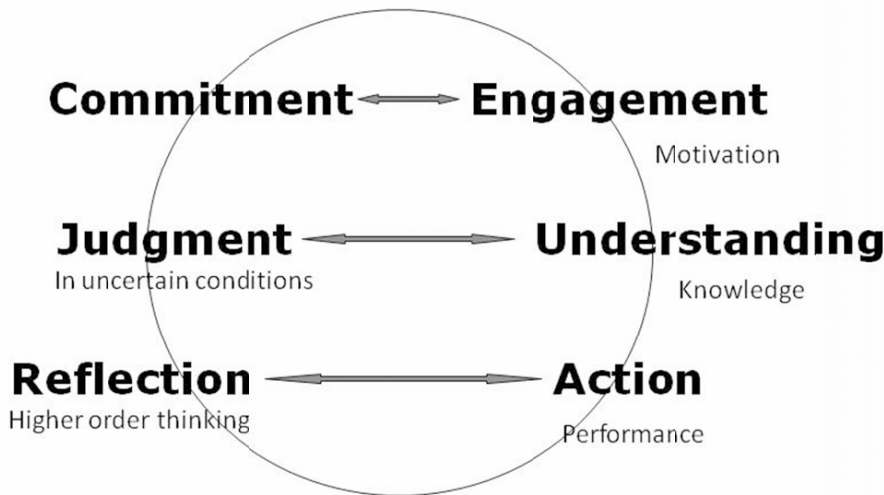
Figure 7.1. Table of learning (adapted from Shulman, 2004)

LEARNING FOR PRACTICE: DISCIPLINARY AND COLLABORATIVE PEDAGOGIES

Signature Pedagogies

In the Carnegie Foundation's study of the professions, an underlying concept was the role of the signature pedagogy. In the study of the five professions, clergy (Foster, Dahill, Goleman, & Tolentino, 2005), law (Sullivan, Colby, Wegner, Bond, & Shulman, 2007), engineering (Sheppard, Macatangay, Colby, & Sullivan, 2008), nursing (Benner, Sutphen, Leonard, & Day, 2009), and medicine (Cooke, Irby, & O'Brien, 2010), researchers identified what they called a signature pedagogy. A signature pedagogy is a characteristic form of teaching and learning that organises fundamental ways in which professional students are educated across three identified dimensions of professional work (to think, to perform and to

act) (Shulman, 2005). In professional education, not all professions focus equally on these domains. For example, in legal education there is strong emphasis on thinking like a lawyer, with far less emphasis on clinical application or the actual learning to practise or perform as a lawyer. In medicine, the classroom of analysis and application is the clinical environment where "bedside teaching" occurs across a clinical triad – the patient, the senior attending physician and student physicians.

These signature pedagogies are important because they define what counts as knowledge in a field and how things become known. The signature pedagogy defines how knowledge is analysed, accepted or discarded, defines the functions of expertise in a field, the locus of authority and the design of educational institutions for those fields. A signature pedagogy has three dimensions – a surface structure, which is the concrete, operational acts of teaching and learning; a deep structure, which is the set of assumptions about how to impart knowledge and application of that knowledge; and an implicit structure, which is the moral dimension that includes the set of beliefs about professional attitudes, beliefs and dispositions (Shulman, 2005).

To return to the example of legal education, the surface structure is the well-known legal case method where the professor controls the pace and directs the questions, and discussion centres on analysis of the case and legal principles in the interpretation. The deeper structure of pedagogy in legal education is what underlies this teaching, how to impart the theory of the law and facilitate development of analytical reasoning skills or thinking like a lawyer. The implicit structure of the legal case method is the emphasis on legal reasoning often held in tension with moral judgement. Although a student may question what is fair to all parties, the emphasis is on learning the law, not what is fair. Signature pedagogies also provide the opportunity to observe what might be missing. For instance, the pedagogy of practice and performance, so common in the health professions, is something that is uncommon in legal education.

Shulman (2005) saw signature pedagogies in the professions as tools to bridge theory and practice. These pedagogies are pervasive in a profession and also routine, so they cut across courses, programs and educational institutions. Shulman also saw that professions can adapt their own signatures, and therefore advocated that we have much to learn by examining the signature pedagogies across professions to see how we might improve teaching and learning.

> Signature pedagogies make a difference – they form habits of the mind, habits of the heart and habits of the hand. As Erickson observed, in the context of nurseries, signature pedagogies prefigure the cultures of professional work and provide early socialization into the practice and values of a field. (Shulman, 2005, p. 59)

Participatory Pedagogies

While each profession may have a distinct pedagogy of teaching and learning, practice demands that learners are immersed in a community of practice environment (Webster-Wright, 2009; Hafler, 2011). It is in this community of practice environment that students/novice professionals work alongside other professionals in receiving guidance and feedback on their performance. We also know that across professions, most students see these experiences as their real education, where they learn to practise. This is not surprising, as professions are about practice and it is in practice where professionals do their work. Most professions have some element of supervised practice in a clinical or field setting. In the health professions, students are coached or guided as they progress with patient care activities.

In these clinical or applied settings, students must find ways of addressing practice problems by taking what they have learned in the academic setting and transforming, adapting, and shaping what they know into a clinical knowledge base that is needed to practise. This requires learning from experience while engaged in the workplace, a community of practice. This workplace learning involves relationships and interactions in the practice community. It is in the practice setting where social cultural learning theories that focus on the importance of situated learning are at work. Here, learning is participatory and interactive, as meanings or social construction of knowledge are created in these communities of practice (Webster-Wright, 2009; Hafler, 2011).

O'Brien (2011), in summarising research on extraordinary workplace learning, posed a useful conceptual framework for exploring the participatory pedagogy that is central to workplace learning (Billett, Barker, & Hernon-Tinning, 2004; Grossman, 2005; Foster et al., 2005; Cooke et al., 2010; Benner et al., 2009). At the heart of the framework is the learning that occurs in the workplace setting through participation. Three identified dimensions contribute to this participatory learning (see Figure 7.2).

The first dimension is the relationships that are central in the practice community. We generally see three types of interaction between clinical instructors or teachers and students in practice settings: coaching, mentoring or supervising. In a coaching relationship, the instructor generally provides personal, individualised, task-oriented support, whereas in mentoring there is less task-orienting and more in-depth feedback, usually over a longer period of time. Finally, supervision occurs when the learner is given the opportunity to practise under observation, and there are often predetermined objectives and directed feedback. All three of these relationships (coaching, mentoring, and supervision) can create supported participation. A critical element in this relationship dimension is feedback. Also critical to the relationship is how welcoming the learning environment is. Poor interpersonal relationships in the workplace and "turf issues" can interfere with participatory learning in the workplace (O'Brien, 2011).
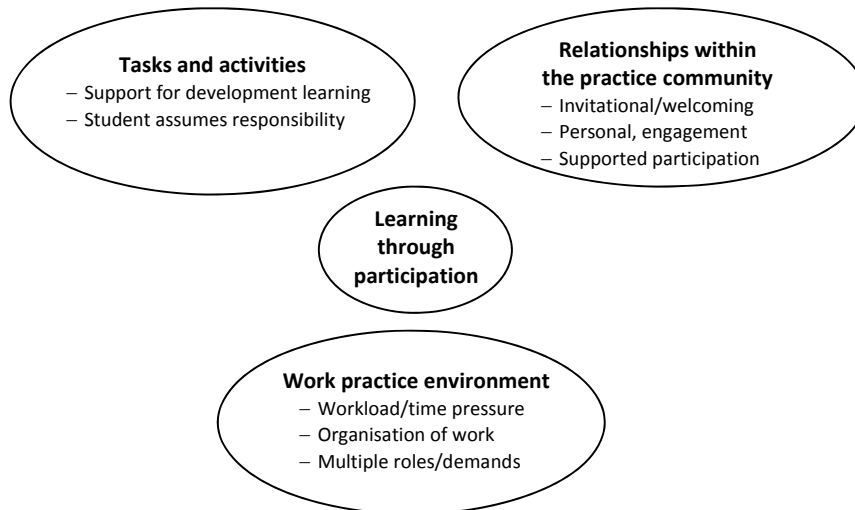
Figure 7.2. Dimensions of workplace learning (adapted from O'Brien, 2011)

A second dimension is the selection of tasks and activities in a workplace curriculum that can not only support learning but also make learning extraordinary. The content in a workplace curriculum is hard to plan, given the unpredictability of practice settings, but everything a student does is a learning opportunity and experience. Here, there is support for the developmental learning that students engage in as they learn to perform tasks skilfully and responsibly, take on more responsibility and gain the trust of their supervisors. One of the key factors in this dimension is the instructor's ability to conceptualise workplace experiences as a learning progression and integrate that with the learning trajectory of the student. These four skills have been identified as critical for workplace instructors (Svinicki & Wilkerson, 2011):

– Recognising key skills and opportunities to teach them
– Setting goals and evaluating attainment
– Observing the student and giving supportive yet diagnostic feedback
– Coordinating the elements of the workplace environment and making them accessible to the student.

Students must also engage in taking responsibility for their own learning as there are more opportunities to participate than in the classroom. In some workplaces there is limited understanding of what a learning progression or pathway may be for a student, and instructors might be too tightly linked to what comes up day-to-day rather than thinking about learner progression.

The third dimension is how routine practices and the culture can support student learning in the workplace (O'Brien, 2011). This is the context or physical and social environment in which the relationships, interactions and tasks are performed. Here the advantage of workplace learning is that students see the authenticity of how practice actually occurs. The workplace norms, number of clients seen, how the work is organised and the use of technology can all have an effect on workplace learning. Just as in the academic curriculum, there is a formal or explicit curriculum as well as a hidden or informal curriculum. Students may see, hear and participate in practices that they might have learned have no evidence-base.

The challenge then is for students to try to see the strengths and weaknesses of the setting and focus on what they can learn. In positive learning environments where there are strong role models promoting the highest level of professionalism there will be a powerful hidden curriculum supporting the role of the professional; the reverse occurs in environments where the values of the profession are disregarded. A final element in the nature of the workplace practice is the many roles the workplace instructor may have. Instructors have dual responsibility to the clients as well as students, and there may be competing demands for productivity as well as quality and, above all, safety.

Workplace learning occurs in a community of practice both within and across professions. This dynamic community, where so much of professional learning occurs, is an important environment for research. Although each profession has its own signature, the learning that occurs in the community context of practice is an essential dimension of professional education and learning for practice.

LEARNING FOR PRACTICE: LEARNING AS A WAY OF BEING

What must happen for learners to integrate the essential analytical and narrative aspects of learning discussed above into an internalised way of being and doing? In other words, to integrate their identity as professional beings with readiness for purposive professional action over a lifetime?

For this necessary step in professional identity formation the emerging professional must become prepared to engage continually in new areas of competence and, perhaps more fundamentally, to fully embrace social-moral realities that are embedded in the clients' narratives, realities that do not present clear answers regarding how to facilitate a positive outcome for the client. Put another way, both the virtue of competence viewed as the reward of analytical learning and the basic moral virtues (e.g., compassion, honesty, fairness) associated with the mastery of narrative learning are going to be tested from time to time, threatening to undermine the professional's confidence and possibly to erode his or her very identity.

Plato, Aristotle and others introduced the notion of courage as a virtue or character trait that protects the other virtues at their testing point, equating courage

with bravery or fortitude. This inner resource stands ready to come into play on behalf of learners, each of whom will need to learn new areas of competence and to learn what care/service, compassion or fairness really requires in the individual situation. The idea that successful professionals must have the *courage to learn* – and continue to learn – throughout their lifetime must be instilled early in the educational process. This goal requires more of educators than declaring that a love of learning will automatically follow learners throughout their professional career. A more effective strategy is to help learners understand that bravery is required because encountering new unknowns usually creates feelings of vulnerability and fear that act as barriers rather than motivators. Understanding that courage is required in this type of situation can be taught any time a learner is faced with something new.

A good example is to assure students of how brave they are to perform that first procedure on a "real patient," knowing that this moment is one test of readiness for the prized goal of becoming competent as a professional. At the same time, learners must be encouraged to recognise that humility and acknowledgement of one's human vulnerabilities are part and parcel of "getting up the courage" to remain competent through continued learning. Much current education ignores these dynamics, substituting positive reinforcement when learners demonstrate mastery while treating doubt or error as failure. Gentle support for getting it right allows the courage to fail if necessary, but not to allow the fear of failure to have a stranglehold on the learner's psyche and undermine the learner's professional identity over time.

There is yet more to courage that has emerged over the centuries. Just as the early Greeks saw courage as an inner resource that empowers a person to overcome paralysis or self-defeating conduct in the face of serious physical or mental threat to a desired goal, learners can count on it when faced with moral upheaval. What is required is *the courage to be moral*. Purtilo (2000) provided a working definition of moral courage as a readiness for voluntary, purposive action in situations that engender realistic fear or anxiety, in order to uphold something of moral value.

Kidder (2005) observed that "moral courage requires moral character traits and skills consistent with understandings of the common good and therefore includes different or additional underpinnings than physical [or mental] courage." For a professional, being moral must include an understanding of the common good through the lenses of moral virtues that constitute a core of professional moral identity such as care, accountability, compassion, honesty and fairness. These virtues help orient professionals to act in ways that benefit others. Moral courage gives professionals an inner impetus to "get up and go" or "persevere" when faced with situations that threaten the wellbeing of clients and others through uncaring, uncompassionate, dishonest or unfair actions. At the same time it upholds learning to be morally courageous in challenging situations as constituting a core part of professional identity.

More is needed for the lifelong professional to draw on this resource than practice in being brave, though that will help. Nor are declarations to the learner to "be moral" or to "live by the professional code" sufficient preparation for what lies ahead. Hauerwas (1986) correctly identified a powerful inner barrier to courageous action in the learner's understandable hesitancy to fully take on the reality that the narrative contents of clients' stories meet the criteria of a classical tragedy in which good people are faced with impossible situations. Tragic situations have the power to disorient and even destroy.

How can educators prepare learners for such human circumstances? Classical or modern stories of courage in deeply troubling situations are seldom included in educational programs but they can add insight. Becoming acquainted with the language of ethics to describe what the professional is experiencing from an ethical point of view can be empowering, too. For instance, initially Jameton (1984) and later Austin (2007), among others, proposed that moral distress occurs when a professional knows the morally right course of action consistent with say, care, compassion, being accountable, or fair treatment, but judges that he or she cannot accomplish it due to external barriers such as policies or institutional practices. The professional, then, is required to intervene in a tragedy and might believe s/he cannot do so effectively, even if technically competent. These pressures on professional identity have the power to jar anyone's confidence in who one is and what one should do.

Opportunities for the learner to encounter simulated situations that threaten moral integrity and to work within safe environments to identify practical strategies that would minimise harm should be offered to learners in professional courses. Ethics courses can help when augmented by discussions or journaling that guide learners through the unwelcome dynamics of fear and realistic threat that accompany some decisions. Role playing can be effective as well. The more moral courage is reinforced and illustrated early in learners' education, the more likely it will arise as an inner resource as part of the professional identity and support moral agency over the long haul (Jensen, Royeen, & Purtilo, 2010).

Learning to act from a core of courage obviously is not the only possible constituent of a professional identity characterised by learning as a way of being, but it is a powerful tool towards realising that laudable end.

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JULIE BALDRY CURRENS AND JULIA COYLE

8. PRACTICE-BASED LEARNING

Multiple Dimensions and the Importance of "Others"

Learning to become a professional, autonomous clinician requires the acquisition of an extensive set of knowledge, skills and behaviours. Regular immersion in the complex and diverse world of professional practice is a crucial aspect of the learning journey. In this chapter we argue that for practice-based learning to be both effective and meaningful it must include an appreciation of the multi-dimensional nature of healthcare. For graduates to be work-ready, they should previously have encountered three key dimensions of practice. First, as students they should have achieved competence and confidence in working and learning with a range of "others." This starts with fellow students, gaining teamwork and collaboration skills. Second, students should have worked with colleagues and students from different professions, encountering various roles and levels of expertise, learning to identify commonalities of practice and locating the uniqueness of their own contribution. Third, learning should have been situated in authentic practice settings, ensuring adequate exposure and enculturation within the diverse milieu of practice.

BUILDING MULTI-DIMENSIONALITY INTO PRACTICE-BASED EDUCATION

Practice-based learning must offer experiences that equip learners with the capacity to cope with the complex and diverse nature of practice with its many, often conflicting priorities and unpredictable outcomes. This complexity can be daunting for students as they progress through higher to lower levels of support, while facing increasing challenge. It is also difficult for clinical educators to orchestrate appropriate learning opportunities. Fortunately, many sources of learning and support are available to students that extend beyond the direct reach of the clinical educator. Learning with and from student peers is invaluable in this regard, as is exposure to a range of intra- and interprofessional situations in which practice can be viewed from different perspectives. We argue that for practice to become holistic and patient-centred or client-centred, learners must have engaged in learning experiences that are themselves multi-dimensional.

Educators try to offer opportunities for students to both *learn* and *function effectively* in a range of academic and clinical contexts, using both propositional (fact-based) and craft-based (practice-specific) knowledge. During these episodes, they will receive support from many "others," including academic and clinical

colleagues and student peers. Clinical presentations of common and rare conditions will be encountered, manifesting according to a host of variables including level of chronicity, age, gender, ethnicity and co-existing pathologies. Similarly, students will learn to function in uni-disciplinary clinics, in multi- and interdisciplinary teams, wards and units, while providing care on an in- and out-patient basis and in patients' own homes. Through this composite picture, students build a rich and holistic view of practice that both witnesses and examines understanding of their own discipline and its relationship with others.

Underlying Theory

In this chapter we consider three models of practice-based education that offer multi-dimensionality and contact with a range of "others": peer learning, interprofessional learning and situated learning. All have a common theoretical foundation that locates learning as a socially constructed activity. Constructivist theories of learning traditionally draw on the work of Piaget (1926) and Vygotsky (1978), who emphasised the importance of sociocognitive and sociocultural development. Piaget argued that learning occurs through processes of conflict and reconciliation as we seek to integrate new information with pre-existing knowledge. Vygotsky stressed the importance of help from another person in this process, particularly in relation to skill development. Social interaction, dialogue and cognitive challenge, demonstration, modelling and reinforcement all contribute to constructivist learning (see e.g. Bandura, 1971; Johnson & Johnson, 1987; Renshaw, 2004). In this respect, the constructivist stance incorporates understandings of learning from both behaviourist and cognitive stances. The practice setting offers rich and varied opportunities for such learning through interaction with student peers and with colleagues from one's own profession and from other disciplines.

Below, we illustrate the means by which students' engagement in multi-dimensionality is facilitated, challenged and supported through peer learning, interprofessional learning and situated learning.

PEER LEARNING

Learning with and from others is a vital aspect of effective clinical practice: it facilitates students gaining confidence and competence in clinical skills and in the knowledge and application of theory. Effective participation in peer learning supports the development of students as effective team players, capable of meaningful professional relationships and collaborative problem solving. Significant components related to the companionship, collaboration and comparison experienced by students engaging in this process have been identified (Baldry Currens, 2008, 2010); these are outlined in the following sections and considered in relation to their contribution to multi-dimensionality.

Companionship

Experiencing the uniqueness and challenge of clinical experiences can be both exhilarating and overwhelming. The presence of a student peer helps to reduce the magnitude of the situation by offering reassurance and safety through a sense of the familiar. Friendship or even prior knowledge of peers is unimportant, provided compatibility, trustworthiness, mutual tolerance and respect exist. Through expression of similar anxieties and insecurities, peers learn to offer support and reassurance, build confidence, identify solutions and celebrate achievements. Using relaxed language and gesture, and drawing on real experiences, peers offer one another a space for expression that is usually perceived as more supportive and less judgemental than that with an educator. In this space, peers help to mediate emotional expression and create conditions that are conducive to learning.

Collaboration

A paradigm that emphasises the importance of learning with and from fellow learners might challenge those more familiar with traditional approaches in which learning and teaching are led by a senior and accomplished educator. Broadly, the peer learning process integrates sharing and disclosure with dialogic, reflective, experiential and discovery-based learning. These experiences might be constructed and planned by the clinical educator, but it is more common for peer learning to occur spontaneously, created between peers without the presence or organisation of an educator. As peer learning is an umbrella term that comprises many formats and incorporates a variety of activities (see e.g. Rushton & Lindsay, 2003; Ladyshewsky, 2006), it is helpful to identify two principal sets of collaborative learning activities that comprise peer learning behaviours, namely those that are dialogic and those that are activity-based (Baldry Currens, 2008). In both dialogic and activity-based collaboration, peers engage flexibly, according to the demands of the clinical situation and the needs and preferences of participants.

Dialogic activities include asking and answering questions, ranging in complexity from simple to highly complex, sometimes indicating the need for broader consultation with others. Peers help thoughts to be clarified and concepts reframed. They exchange ideas and information, accumulate and extend knowledge and practice. In some peer relationships richer dialogues may also be observed, in which dynamic and highly interactive discourse involves probing of ideas, mutual elaboration, and the creation of new conceptions and meaning.

Activity-based behaviours involve a range of situations and behaviours in which peers learn through practice. These may include the modelling of effective behaviours and strategies that peers wish to emulate, as well as those less successful that they wish to avoid. Peers practise treatment approaches together, learning through repetition and rehearsal. They observe and review one another's practice, sometimes tutoring each other, using supportive critique as a platform for mutual investment in learning, consolidating and reinforcing skill development.

Comparison and Competition

Many students find it helpful to compare their progress with that of a peer. Ideally, this is a private, internalised process, in which a peer (inadvertently) provides a "mirror" in which a clearer judgement of one's own performance can be obtained (Baldry Currens, 2008). Competition between peers may be perceived as positive and constructive, providing a motivational boost. However, conceptions of both comparison and competition are highly individual and, for some, carry negative connotations. Mismatched or inappropriate perceptions and behaviours can result in rivalry and one-up-manship, damaged self-esteem and the loss of valuable learning opportunities.

The presence of a peer offers an expanded horizon on which broader perspectives and differing views may be explored. Challenge and conflict resolution are critical to constructivist learning practices, as are opportunities to disaggregate and reassemble ideas, consolidate understanding, create and co-create new meaning and knowledge; these activities enhance understanding of practice within a profession. However, for practice to fully meet the needs of patients, it is also essential that students appreciate their practice through the eyes of others, as can occur in interprofessional learning experiences.

INTERPROFESSIONAL LEARNING

Learning in an interprofessional context occurs when "*two or more professions learn with, from and about each other to improve collaboration and the quality of care*" (CAIPE, 2012, para. 1). We argue that interprofessional learning (IPL) adds a dimension that is important to the development of students' understanding of their own discipline and its relationship to other disciplines. Thus IPL can be seen to underpin graduates' capacity to be effective in the provision of holistic, client-centred health care. As explored below, engaging in effective IPL requires understanding of different approaches to learning and teaching, and knowledge of the characteristics of both students and educators that affect IPL experiences.

Proponents of IPL recognise that prior experiences, perceptions, expectations and ways of using and understanding knowledge (Hammick, Freeth, Koppel, Reeves, & Barr, 2007) influence engagement with, and outcomes from, experiences of interprofessional education. Rather than try to minimise the effect of prior knowledge and experiences, effective interprofessional education draws upon these to provide a richness and diversity to students' learning experiences. By bridging the gap between previous and current experiences, educators can capture students' attention, an important first step in the acquisition of knowledge and the development of new understandings (Braungart & Braungart, 2002). Ways in which different interpretations distort reality and perpetuate myths about other professions and their practices may also be identified.

The influence of previous experience is important for the use of practice-based IPL. For example, IPL may be seen across a spectrum of approaches, from several professions learning in the same classroom, such as found in foundation science

classes (anatomy and physiology) in health education, to small groups of students from different disciplines working in partnership with a client in practice. Enabling students to realise their potential in the latter requires an understanding of the perceptions and interpretations that arose from the former. Essentially, a rich, holistic learning experience is one that witnesses and tests students' understanding of their own discipline with other disciplines in all aspects of their learning journey. IPL experiences that draw upon students' previous experiences enable them to interpret new information on the basis of what they already know and, through re-organisation, to create new insights or understanding of their own practice (Bandura, 2001; Hunt, Ellis, & Ellis, 2004).

For those involved in health education, where school leavers often predominate in student cohorts, it is important to be aware of the characteristics that differentiate adolescent from adult thinking. Adult thinking is marked by the capacity to handle contradiction and to synthesise information in ways that effectively integrate what has been previously learned (Kramer, 1983). IPL is unique in its capacity to present contradictions as individuals from different professions grapple with different ways of knowing and different perspectives. For students who are yet to establish adult ways of thinking, this can be unsettling, detracting from their enjoyment of the educational experience and perhaps reducing their sense of value for interprofessional practice and for the role of others.

Undertaking IPL just for the purpose of experiencing it is likely to fail to engage students whose key goal is to become a member of a specific profession. Indeed, IPL provides a vehicle for students to move in and out of the languages of different practices. The realisation of useful outcomes from IPL is dependent upon authentic learning, where experiences are directly related to the goals of learners, an helping them to identify the purpose of their learning. IPL provides opportunities for such authentic and tangible experiences when educators directly link the IPL experience to objectives related to an individual student's professional practice. Scaffolding this with opportunities for discussion and reflection about the student's professional and team roles and the roles of others can facilitate movement beyond basic understanding of interprofessional practice to a depth of awareness of professional practice and its impact on holistic client-centred care. Through repeated effective IPL experiences, students can build understanding in the further development of their identity as practising individuals.

Scaffolding to authenticate IPL experiences may be used with other strategies to develop a student-centred approach to learning. This has been associated with enhanced learning outcomes (Lea, Stephenson, & Troy, 2003). However, student-centred approaches require care as they can add a destabilising layer of complexity (Geelan, 1999), important in the complex IPL context where students are already reframing their professional identities. The presage-product-process model of student learning (Biggs, 1999) is another reminder of the need for awareness of the influence of previous learning experiences on a current experience. That is, in IPL as in other approaches, student perceptions from previous experiences of what is required (i.e., surface learning achieves success) will lead to them adopt similar

approaches in the new context regardless of the stance of the educator. Choice is a key element in adult learning and has been the capstone for student-centred learning (see Burnard, 1999; Taylor, 2000 for further reading). However, educators should negotiate with students to ensure that expectations are understood and that approaches are adapted in ways that help students to focus on areas of perceived as well as actual need.

IPL is a fundamental dimension in the development of graduates who are capable of holistic, client-centred practice. However, IPL experiences should be constructed in ways that enable involved professionals to understand another professional's practice by more than just what they see. A superficial exposure could leave them with a blinkered view of the world, limiting their capacity to transfer knowledge. As with any learning, it is important to break down tasks so that students can build an understanding of their role in relation to other professions. Situated learning provides an ideal context for this.

SITUATED LEARNING

Lave and Wenger (1991) identified the fundamental importance of context and culture in relation to learning activity. Their theory of situated learning locates a learner as one who acquires knowledge and skills through engagement in authentic processes and practices, gained primarily through working with "others." The concept of "legitimate peripheral participation" (Lave & Wenger, 1991, p. 29) is critical; it emphasises the centrality of learning through interaction with colleagues within a community of practice, working alongside experts and participating in their practice, progressively undertaking tasks and responsibilities of increasing complexity. Preferred learning practices avoid hierarchical, instruction-dominated direction from experts, instead favouring interactive learning, improvisation and co-construction with peers (Wenger, 1998).

A pedagogy that emphasises immersion in authentic culture, progressive engagement, peer learning and exposure to the practice of more experienced colleagues has considerable resonance with current assumptions and aspirations of professional healthcare education. To some extent, it is reasonable to claim that all practice-based programs that provide placements of any type offer learners the experience of situatedness. It is also possible to extend this further by offering entry programs with a construction more firmly rooted in situated learning theory. This has been previously described in relation to physiotherapy (Baldry Currens & Hargreaves, 2010), in which students are primarily located as "interns" within an employing hospital, having been jointly recruited and selected by both the hospital and the university. Learning and responsibility for teaching occur equally in both settings – a significant difference from more traditional models of academic provision (involving periods of block practice placement or those in which physiotherapy assistants engage in degree programs).

Partnership and Collaboration

The creation and implementation of an undergraduate healthcare degree based on situated learning theory, such as the model described above, requires significant investment and partnership from both healthcare providers and universities. Close collaboration is essential in designing curricula that will be jointly owned and delivered by clinicians and academic partners. The realities of delivering within the workplace learning opportunities that in more traditional programs would be delivered within a university in preparation for later application on placement, provide considerable challenges. Careful negotiation can result in greater mutual understanding and respect for organisational perspectives and institutional priorities. A further positive outcome is that, since clinicians and academics make a more equal investment in supporting the development of skills and knowledge in each learner, there is potential for a more fully realised sense of shared satisfaction and achievement.

The Learning Experience

For learners undergoing a situated learning program, the experience, like practice-based education more generally, can be overwhelming. It is essential, therefore, to help learners identify explicit links between structured clinical experiences, curriculum content and intended learning outcomes. Peer learning is invaluable in this regard. Furthermore, offering support in the formulation and navigation of manageable learning activities of appropriate breadth and depth is crucial, ensuring that learners are able to identify the achievement of specific milestones in terms of knowledge, skills and behaviours. Similarly, helping learners to recognise and value both propositional and non-propositional knowledge is important, especially since university and clinical practice tend to attach value to different types of knowledge. Situated learners can often be caught in the cross-fire of expectations related to traditional and espoused theory and the weight of research-based evidence, so valued by academics, versus the realities of practice in the field. Differences in practice between clinicians, particularly professionals of differing levels of seniority and specialty, can prove immensely contradictory and confusing in this regard. Exposure to theory–practice dichotomies, and acquiring the skills to successfully navigate such challenges, is a significant hallmark of a situated learning program, as is enculturation within the often complex and multiple realities of authentic practice (Baldry Currens & Hargreaves, 2010).

SIGNIFICANT QUESTIONS FOR PRACTICE AND LEARNING

We have highlighted three models that offer multi-dimensionality to the practice-based education of health professionals. Their use foregrounds the need to balance exposure of learners to practice that is complex, messy and real, with simplification of practice in order to support student learning. We have emphasised the value of learning from a diverse range of "others" throughout these learning experiences in

order to gain richer perspectives. We have argued that integration of the three models of learning is important, and we recommend adopting this approach from students' first learning experiences in courses.

Students bring prior experiences and perceptions of the health profession that they seek to join. Early exposure to the realities of practice would seem to be critical, since students' professional identity and understanding of their role as a member of that profession already has some substance. However, simplification of this approach through scaffolding is necessary, to prevent the experience being reduced to knowledge transmission, rather than being transformative.

The key goal of scaffolding should be to empower the learner, facilitating independent problem solving and self-regulated learning. Holton and Clarke (2006) identified agency as central, defining scaffolding as "an act of teaching that (i) supports the immediate construction of knowledge by the learner; and (ii) provides the basis for the future independent learning of the individual" (p. 131). Scaffolded learning has strong links with the acquisition of metacognitive capabilities and the skills necessary for effective clinical practice, such as critical thinking, reflective judgement and problem solving (Holton & Clarke, 2006). Metacognition is essential when a task becomes more complex and thus more challenging. It requires a person to have the ability to self-regulate or self-control, to have knowledge of one's beliefs, intuitions and thought processes (Schoenfeld, 1992).

Many students need help from educators if they are to establish capabilities that support metacognition in health practice. Achieving this in the multi-dimensional model that we have outlined is ideally supported by a paced approach to teaching that builds upon a foundation of simple experiences, cases and contexts and exposes learners to progressively greater degrees of difficulty. The skill lies in designing experiences that provide incremental exposure to additional layers of complexity in ways that support rather than undermine student learning in the context of real-world practice. While real-world learning cannot be stage-managed to offer precisely the most appropriate degree of challenge, over-exposure can be mediated to some extent by the support of student peers and more experienced professionals.

CONCLUSION

In this chapter we have argued that practice-based experiences are most effective when they integrate three dimensions that enable learners to appreciate the complex interplay of practice elements. Opportunities for peer learning support knowledge creation and skill development while promoting team practice and collaborative problem solving. Interprofessional experience helps learners to appreciate the balance between the perspectives of self and others as they develop a broader view of practice. Finally, we emphasised the importance of situatedness and facilitated exposure to the realities of authentic practice, ideally gained through graded exposure to complexity. We believe that the inclusion of these three dimensions in practice-based education supports the development of sensitive,

flexible and client-centred professionals who are able to apply metacognitive strategies across the rich tapestry of clinical challenges.

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SECTION 2: PRACTICE-BASED EDUCATION IN ACTION

LAURIE GREALISH AND FRANZISKA TREDE

9. STUDENT NURSE LED WARD IN AGED CARE

In this chapter we present an innovative clinical education model in nursing known as the Student Nurse Led Ward model of clinical education, which is in the style of dedicated education units (Edgecombe, Wotton, Gonda, & Mason, 1999) and based in the residential aged care setting. The Student Nurse Led Ward model provides for students from third, second and first year to work collaboratively in a service unit. Senior students mentor junior students, enabling skill development in peer learning and leadership. The students work closely with clinical staff members who provide mentoring and feedback. An on-site nurse educator develops staff capacity for supervision and supports student learning through reflection and discussion.

THE SETTING

This case study is set in three Canberra-based residential aged care centres that are formally partnered with the University of Canberra through memoranda of understanding. All three are not-for-profit private services. The aged care services include a mix of high and low residential beds, independent living units and community service packages. The Student Nurse Led Ward in Aged Care (SNLW) project was established in 2010 with financial support from an Australian Department of Health and Ageing (DoHA) grant.

The SNLW project was an innovative pilot developed collaboratively with the three service partners to increase the clinical training capacity of the University of Canberra. The primary purpose was to increase enrolled student numbers and therefore graduate registered nurses to address a rising workforce shortage generally, and in the aged care sector specifically. This project was developed and led by the first author.

The SNLW project involved the placement of heterogeneous groups of nursing students from third, second and first year in the aged care centre. With support from the DoHA grant, each aged care centre employed a full-time nurse educator (registered nurse background) who worked with the centre staff to develop a community that welcomed the students and could provide appropriate learning opportunities for each year level. In this model, students worked in small heterogeneous groups, led by the third year student and supported by the nurse educator, registered and enrolled nurses, trained personal care workers and assistants in nursing. The university provided training and a monthly peer support meeting for nurse educators. Through this model, students were supported to develop teamwork skills including delegation, problem-solving and clinical leadership.

THE FOCUS

There is an international nursing shortage, with Australia relying heavily on nurses who qualified overseas to meet its workforce requirements (Buchan, Naccarella, & Brooks, 2011). At a national level, as the baby boomer generation in Australia ages, the numbers of older persons requiring aged care services, including routine clinical nursing care, is expected to rise. These expected trends require a nursing workforce that understands the heath challenges confronting older Australians, particularly the impact of chronic illness in aging, as well as the impact of the changing social structure of families in society.

Challenged by evidence that nursing students are increasingly less likely to work in aged care as they progress through their studies (Stevens, 2011), this project took as its primary focus the need to produce greater numbers of graduate nurses to address the nurse shortage. A secondary, but equally important, focus was to prepare graduate nurses to work appropriately with older people and provide opportunities for learning about chronic illness, palliative care and clinical leadership, as well as skill development in bodily care and communication.

THE STRATEGY

With the support of the grant, three full-time nurse educators were appointed in each aged care centre. These nurse educators all had experience in the aged care sector, which was perceived as important for credibility with students and staff. Although the students are on placement for an average of only 35 weeks of the year, the work of the nurse educator in preparing and supporting staff who host these students is continuous throughout the year. The nurse educator role has become highly valued in each of the aged care centres. As the project moves into a sustainable phase, there is now shared funding of the positions.

In this model, students usually attend placement in a 2-day per week pattern over the course of a 14-week semester. Third year students, with higher placement day requirements, come into the setting first, usually in the second week of semester. Second year students come to the facility 2–3 weeks later, followed by first year students 4 weeks later again (see Figure 9.1).

Year group	Week of semester													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Third								Classfree						
Second														
First														

Figure 9.1. Student placement configuration

Up to three third year students lead in each centre. The third year students support the orientation of the second year students and in doing so develop a rapport for future peer learning and support. Third year students plan an orientation program for first year students in consultation with the nurse educator and second year students. In this way, the students become more engaged in identifying learning opportunities and developing relationships.

The students work in small groups or pairs, sometimes with each other and sometimes with aged care centre staff, depending upon the circumstances. The nurse educator facilitates appropriate selection of residents and care activities to support student learning from experience, and plans learning or debriefing sessions on most days. These can be quite lively later in the semester, when up to 18 students can be in one of the two larger facilities on a single day (usually in two shifts).

The nurse educator provides short (45-minute) workshops for staff on how to facilitate student learning, including topics such as assessing learning needs and opportunities, providing feedback, and responding to students who are not engaging. These are sometimes co-delivered with faculty from the university. The nurse educators also include students in on-site continuing education on topics such as wound care, use of new equipment, and infection control updates.

Students are kept informed about their progress against competency standards for the placement and learning objectives that were established by students in collaboration with educators in the first week. The nurse educator meets with students at the half-way point in their experience to provide feedback on performance to date and collaboratively identify further learning opportunities to facilitate further learning. The nurse educator is also responsible for the final competency assessment, which draws on data collected from personal observations of the student, feedback from staff in the facility, and student participation in group discussions and peer support. Concerns about a student's performance are raised early with the student and reported to the relevant university unit convener as per the placement guidelines. When a student's learning and performance are not progressing, a formal learning contract is developed between the student, the nurse educator and the unit convener.

The clinical model is designed to develop a community of learners, recognising that everyone on the team is continually learning, providing feedback, and negotiating best practice in the situation, and that this can benefit residents. Peer learning theory (Aston & Molassiotis, 2003) informs facilitation by the nurse educator, with students assigned to work in care teams, sometimes in year groups but more often in cross-year groups. Students can then ask each other questions and seek information together, without fear of being judged by possible future employers. Senior students are encouraged to use coaching skills (Grealish, 2000) to support others' learning.

The relatively small number of aged care services (compared to large public and private hospitals and health services) provides opportunities for senior nursing students to undertake leadership work experience in the areas of quality and safety monitoring, resource management, team leadership, and liaising with private health

service providers such as pharmacists, physiotherapists and nutritionists. In this way, the aged care model provides senior undergraduate nursing students with leadership opportunities in a sector where clinical care is relatively stable.

CHALLENGES FACED

Clinical placement in residential aged care facilities provides nursing students with rich learning experiences, including a deep understanding of the trajectory of many chronic illnesses, the aging process and the social as well as medical impact of aging in contemporary society.

Nursing students tend not to seek a career in aged care as part of their professional future, and are often disappointed to learn of their placement in an aged care setting. Nursing students who undertake paid work outside of their studies, as carers or assistants in nursing, often cannot differentiate the roles of the registered nurse and assistant in nursing before they go on placement, and therefore do not believe that they will learn anything new on an aged care placement. This ageist attitude is sustained by a keen focus on acute and short-term care based on technical knowledge and skills that comprise the dominant health care discourse. As students progress through their nursing program they become more ageist in their attitudes (Stevens, 2011), suggesting that course design might be a key factor in those attitudes.

Resistance to Learning in the Aged Care Placement

First year students are relatively open to learning in the aged care placement, but engagement of students in their second and third years of study is more challenging. Many students believe that they must work with a registered nurse in order to learn about registered nursing work and, given the low ratio of registered nurses in the aged care sector, are understandably sceptical about available learning opportunities.

The appointment of the on-site nurse educator has been critical to overcoming resistance and supporting learning. As averred by Billett (2002), good facilitation skills are essential to support student learning. The three nurse educators meet monthly with the first author to collaboratively develop strategies to engage and guide students in ways that support their learning. This guidance requires sensitivity to the learners' readiness to progress (Billett, 2002) and usually begins with a technical procedure that interests students, such as a complex wound dressing. Students are generally keen to develop their skills and engage in the activity. The nurse educator can then link the performance to current and tangible goals such as healing or palliation, underlying pathology and bodily changes associated with aging, and gradually focus on professional practice issues as well. In their weekly discussion group, students' awareness can then be extended to considering the wound dressing requirements for the whole facility, including supply ordering, storage, and staff training.

Role Clarification for Learning

As in all health care settings, in aged care there is a hierarchy of workers and work. Care workers are often responsible for helping with activities of daily living such as personal hygiene and eating, while the registered and enrolled nurses are responsible for clinical aspects of care. Students coming to aged care expect to work with a registered nurse, as they do on their other clinical placements, where there are many registered nurses working on a given shift. In the SNLW model there are typically many more students than registered nurses.

When they arrive on placement, students are invited to develop learning goals for the placement. This is done in discussion with the nurse educator so that student expectations for their learning can be clarified and compared with educator expectations. Third year students are encouraged to develop high-level goals, usually focused on pathophysiology of co-morbidities, associated health interventions and evaluation as well as leadership development. Second year students are encouraged to focus on common diseases and learning about illness trajectories, clinical assessment, medications, and the clinical procedures usually found in aged care. First year students are encouraged to engage in skill development in the areas of assessment and activities of daily living. They engage peripherally with topics developed by second and third year students through structured peer learning activities. All students are encouraged to think critically and to adopt a person-centred approach to their practice.

Students often work in small groups and are required to negotiate workload. Small-group work promotes leadership, negotiation and teamwork skills. The nurse educator informs the relevant staff of the group plan and monitors the situation as the shift progresses.

Through this process students are required to make explicit their understanding of what a registered nurse does, and the nurse educator can facilitate meaning making from students' experience with various team members. This is often undertaken in a daily discussion meeting, facilitated by the nurse educator, on topics raised by the students.

Addressing Ageist Attitudes

Ageism is part of Western contemporary society and is also reflected in the health care sector. The workplace culture in an aged care facility can nurture or resist ageist attitudes. Students come to their aged care experience with a range of views about older people. The on-site nurse educator is well placed to address unreflected assumptions, challenge stereotypes and facilitate critical reflection for students about what it means to grow old in an ageist society. This is an area that requires further research and development, including determining the effects of an aged care placement on ageist attitudes.

Learning about Chronic Illness

Student-generated learning goals for second and third year levels are focused on diseases, trajectories and co-morbidities. The aged care setting provides opportunities to understand some of the consequences of diseases that are diagnosed during mid-life and the effects of those diseases on people's life journeys. Students are encouraged to talk with residents and their families about their life journeys and to consider these personal accounts in conjunction with the clinical accounts. The nurse educator is well positioned to support students in making meaning of these two quite different worlds, the biomedical and the social world.

CRITICAL REFLECTION

This SNLW case study is valuable in many aspects, including strengthening professional partnerships between university and workplace facilities, enhancing the organisational learning environment of a placement facility, developing leadership capability in senior students and facilitating workplace learning. At the organisational level these placements enable the participating aged care facilitates to increase their staff numbers by gaining nurse educators and several nurse students. The dual focus on student learning and staff development provides opportunities to create learning environments for the entire organisation.

The collaborative nature of establishing and implementing the SNLW model at organisational and interpersonal levels (between the university and facilities, and between academic and education nurses) strengthens professional partnerships. The common ground is a shared interest in preparing work-ready graduate nurses who have an understanding of aging. Professional partnerships have been identified as a decisive factor in ensuring quality workplace learning experiences for students (Braunstein, Takei, & Wang, 2011). The regular meetings between the academic and educator nurses not only enhance mutual respect and support but also allow the use of shared teaching and learning approaches for the benefit of students. Regular meetings and discussions remind partners of their roles, and their value in maintaining high-quality and sustainable placements is increased.

Unlike in acute care settings, there is slow resident turnover in aged care facilities. This enables students to get to know and build rapport with residents throughout their placement stay. Because of the nature of aged care, students are confronted not only with issues of medical aspects of aging but also with psycho-social, economic and quality of life aspects. Students are exposed to the need for ethical, respectful and mindful care, as well as patient dignity and person-centred care.

This SNLW offers third year nurse students unique opportunities to develop leadership skills by inviting them to mentor junior peers. Mentoring others is an important leadership skill that is needed for developing future practice. Further, being asked to mentor others helps these students to appreciate that mentoring is not necessarily an easy or straightforward exercise. Surprisingly though, most third

year students are more focused on learning to develop their clinical practice rather than mentoring and leadership skills.

With innovation comes change and not all change is welcome. Baines and Chiarelott (2010) raised potentially problematic issues of professional partnerships that can be detrimental to program quality, institutional reputation and faculty autonomy. In the aged care setting, there is a temptation to use nursing students as extra staff, focused on service delivery rather than treating them as learners. The nurse educators were able to set up clear learning objectives in the context of the organisation's capacity to deliver appropriate learning experiences for the students.

Aged care staff need to adjust their practice to incorporate students and the nurse educator. The degree to which staff engage with students is a key enabler for students to participate in learning. A respectful, reciprocal student-educator and student-staff relationship promises to help all involved to learn and develop their practice, regardless of levels and professional standing (Trede & Smith, 2012).

Establishing the model was time-intense. Collaboration requires listening, negotiating, and at times even giving in to others in order to achieve higher-order aims (Trede & McEwen, in press). Reconciling university and aged care facilities' interests was not entirely straightforward. It required many meetings and rigorous discussions. However, these led to stronger partnerships and the sustainability of this model.

This case study was ambitious because it not only restructured organisational and learning aspects of the participating aged care facilities, but it also started to confront highly entrenched ageist attitudes among nursing students. One should not expect that one placement experience can reverse ageist attitudes but we hope that these aged care experiences at least help students reconsider their career options and set a seed towards empathetic person-centred care and awareness of the diverse, often not only biomedical, needs of their older patients in future practice.

CONCLUSION

The SNLW initiative provides senior undergraduate nursing students with leadership opportunities in a sector where clinical care is relatively stable. This means that nursing students are operating in a relatively (to acute sector) low-risk leadership environment where they can learn about organisational functions and associated governance and management issues. This is a new way to think about student nurse learning in the aged care sector, and would benefit from exploration in other jurisdictions.

The presence of nursing and other health professional students in the aged care centres increased staff awareness about their practice (Grealish, Bail, & Ranse, 2010). This awareness provides a solid foundation for further staff development around team practices and an opportunity for further organisational development to achieve a culture of learning and continuous improvement. Practice-based education not only benefits the students and future patients but can also provide a framework for further organisational development.

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10. CHALLENGES FOR SURGICAL
RESIDENTS' PRACTICE-BASED LEARNING

This chapter explores the practice-based learning of surgical residents. We
concentrate on the challenges encountered and experienced by the residents during
their clinical practice. In line with Billett (2010), we understand learning through
practice as a process that arises through the exercise of occupational activities. For
the surgical residents this means that they learn through participating in various
kinds of hands-on surgical practices and interactions in clinical wards and units.

Recent discussion has indicated a need to enhance workplace learning,
highlighting such aspects as the haphazardness of the learning situations, the
quality and quantity of supervision, and the pedagogical skills of the supervisors
(Billett, 2010; Billett, Harteis, & Eteläpelto, 2008). The aim of the study reported
here was to investigate residents' experiences of their practice-based learning in a
surgical clinic. By looking at the challenges we aim to show how occupational
practice as a learning environment may be developed. The study focuses on how
learning takes place in a clinical setting. We ask the following questions: (1) What
kinds of activities and interactions do residents engage in during their occupational
practice? (2) What kinds of challenges do residents experience in their practice-
based learning?

THE SETTING

To contextualise the practice-based learning of surgical residents a brief
description of surgical residency within the Finnish medical specialisation system
will be useful. After 6 years of basic education physicians are entitled to practise
medicine as independent practitioners. Specialisation in medical subspecialties (5–
6 years) mostly takes the form of clinical training in hospitals. All the various
surgical subspecialties share the same basic-level stage, which lasts 3 years. There
is a framework governing the duration of employment in the various surgical
subspecialties and the procedures to be learned. Furthermore, it is required that
during the initial 3 years residents should gain practical experience in rapid
decision-making and logical deduction.

During the initial stage, the learning processes are documented on a log, and in a
portfolio kept by the resident. The head of the working unit, the Head of Medicine,
usually acts as the *person in charge of the training program*. He/she is responsible
for the implementation of the specialisation program and assigns *medical
specialists* who serve as mentors. Apart from the medical specialists, each resident

is assigned a *personal tutor*. The tutor is the resident's support person; he/she also supervises the resident in his/her work duties and sees to the appropriateness of the curriculum in terms of both theoretical and practical training. Both specialists and tutors are usually medical professionals with no qualifications as educators. They are responsible for the implementation of the learning program, and they also take part in assessment.

FOCUS AND STRATEGY

This study reported here investigates surgical residents' experiences of their practice-based learning during their initial specialisation program (first 3 years). Ethnography (Hammersley & Atkinson, 2007) was utilised as a methodological strategy in this study. The empirical data for the study were gathered via observations and interviews. Three of the authors shadowed 11 surgical residents for 23 days during a 7-week observation period. The aim was to gain an insight into the residents' everyday work practices. In order to construct the meaning ascribed to the learning in practice, the residents were interviewed. During the interviews, more detailed discussion occurred of significant educative moments, both as observed by the researchers and as suggested by the residents themselves.

The challenges of practice-based learning were discussed from the residents' perspectives. For instance, a concrete case could usually be found as a starting point for discussion. The researcher then asked the resident to reflect on the situation and his/her way of dealing with it. Residents were further asked questions such as "What kinds of support do you have in your work? What kinds of situations in your work are most meaningful for your learning, and for developing your surgical competence? What kinds of obstacles do you see to learning?" All the residents were interviewed individually for approximately 1–2 hours. Some of the residents stated that the interview offered an unusual opportunity to reflect on their learning and training.

Data Analysis

The research plan and ethical guidelines were negotiated and accepted by the ethical committees of the university and the hospital. The audio-recorded interviews were transcribed verbatim, and anonymity of the residents was ensured. Thematic analysis (Braun & Clarke, 2006) was used in the data analysis. The analytical process began with a careful reading and re-reading of the interview data. Reviewing was an ongoing organic process, and it consisted of several phases. First, all the sentences that were relevant to learning and training during the program were identified and copied to another file. Then an initial list of ideas was generated concerning what was identified in the data, and what was interesting from the perspective of challenges to learning. The third phase was semantic coding, in which the data were organised into main categories, including hands-on training, the learning context and supervisory practices. This coding was conducted manually. This phase generated a long list of different codes; these were then

clustered into potential themes according to the research questions. Tables and mind-maps were utilised in this phase. In the process of the ethnographic analyses, two typical working days were constructed to describe the context of practice-based learning and to illustrate how the challenges experienced by the residents were embedded in practical settings.

CHALLENGES ENCOUNTERED IN RESIDENTS' PRACTICE-BASED LEARNING

To answer the first research question (regarding the activities and interactions the residents are engaged in during their occupational practice), two vignettes were constructed to illustrate typical working days. The vignettes also give insights into the main challenges encountered by the residents in their learning environment. The vignettes were compiled by the researchers, and the residents did not read or edit them.

Peter's Typical Working Day

As his first task in the morning, Peter checks the lists of surgical operations, both his own and those of his colleagues. Since Peter feels insecure with regard to a certain procedure on the list, he calls Jack, another resident he knows, and asks him to join him in the operation. However, Jack has his own operation list and cannot promise to help Peter – at least not this morning. Peter next checks the room that Harry (a senior colleague whom Peter knows well) is operating in, so that Peter knows where he can go for help if necessary. As he sips his morning coffee, he checks from the electronic information portal the most important pointers relating to the impending surgery. An incoming call comes from the operating room, and everything is ready for the operation.

Peter makes his way to the operating room. He begins the operation and is pleased that his assistant is an experienced instrument nurse, capable of anticipating and handing over the correct instruments should Peter not remember the name of a particular instrument and thus be unable to ask for it. The operation goes well up to a critical point which calls for very precise knowledge. Peter feels insecure and asks for Harry to be called in from the adjacent operating room. After some time, Harry arrives and Peter gives up his place to him. Peter will now be the assistant, shifting to the other side of the patient. Harry checks the situation and performs the critical phases of the operation, after which he returns to his own operating room and Peter goes on to finish the operation. Peter decides to follow up the health of the patient he has just operated on, visiting the ward, and doing his best to ascertain whether this morning's operation has been successful.

Helen's Typical Working Day

The morning begins with a surgical meeting. Helen is a participant. She has not yet been assigned her own operations on the roster, but she will have plenty of time during the day to follow an operation performed by someone else. Her placement is

in the gastric ward. Since Helen has followed a biliary operation on several occasions, she hopes to be allowed to assist in an operation today. Events work out favourably for her. The operating surgeon suggests that Helen should perform the first stage of the operation, opening the abdominal wall and filling the abdominal cavity with carbon dioxide.

In the operating room, Helen receives hands-on training from the senior doctor standing next to her. The discussion concerns the general risks and difficulties pertaining to the operation. The instrument nurse also participates in the discussion and gives an account of her experiences. Helen completes the first stages of the operation, and is allowed to try to use the instruments to detach the tissues surrounding the gall bladder. After a while, the senior surgeon takes over, as the time slot reserved for the operation is insufficient for Helen to be able to complete the operation. Nevertheless, by standing there beside the patient and holding the forceps, Helen has a grandstand view of the operation. During the lunch hour, Helen sits at the same table as her tutor doctor. The tutor doctor asks how Helen managed with the start-up phase of the operation. Helen has a long list of questions on her mind, but she only has time to bring up a few before the tutor surgeon's phone rings and he has to rush to the operating room.

Our second research question focused on the nature of the challenges experienced by the surgical residents in their practice-based clinical learning settings. The analyses highlighted three challenges: (1) the random and context-bound nature of the learning situations, (2) competing supervisory practices, and (3) difficulties in self-evaluation.

The Haphazard and Context-Bound Nature of the Learning Situations

As we may gather from the description of Helen's day, getting into learning situations seems to be partly a matter of luck, though it is also based on the resident's initiative. The residents emphasised that they must, of their own accord, gravitate towards procedures that can be viewed as learning situations. The learning plan for the residency (as detailed in the log book) is expected to encompass the core elements. It should include the kinds of learning situation that a young doctor is likely to encounter and should hence seek to gain experience of during the training. A resident puts the matter thus:

> You won't get a single operation allotted to you in advance when you come into the hospital. It's entirely dependent on your own initiative and the fact that when you are in a particular ward you have to show that you are interested, and that you want to get somewhere.

As we can see from the descriptions of Peter's and Helen's days, the lack of time available to provide proper instruction constitutes a challenge to the learning process. The job takes longer to finish when done by an inexperienced person. The whole operating room team has to wait, and the training of residents is not necessarily seen as an efficient way of working. However, the residents also had experiences of good "teaching operations," in which the instructional nature of the

situation had been taken into consideration, with thorough and systematic instruction provided. The principle is that one initially gets to do the easiest phases and learn the basic techniques, so that later one is able to perform them independently. When a resident performs an operation only in part independently, instruction and support are offered for the more difficult surgical phases.

Residents were also strongly aware of the differences between the wards in which they were placed, as far as learning was concerned. There was considerable variation in the amount and kind of clinical supervision received, and in the contribution of the supervision to the resident's learning. The residents reported contradictory experiences concerning the opportunity to practise and learn surgical skills. As one resident advised:

> At the moment there is a lot of variation between the wards as to the training you get, and the kind of training it consists of.

On the one hand, the hospital seemed to offer good possibilities for learning, because there were not too many residents employed at the same time, and because they were given a lot of work. That being the case, residents felt that their voices were heard in the workplace and that the atmosphere in the hospital was favourable to new ideas. On the other hand, in some wards residents were not given enough work, the range of patients was limited, and the residents felt that they did not have enough control over their work.

Competing Supervisory Practices

The residents had to deliberately seek out supervision and support for their work, as described through Peter's experiences. This was not an easy task, given the nature of surgical supervisory practices, which seemed to be somewhat impermanent and even haphazard. The point here is that the roles of specialist mentors were not very clear. Furthermore, the roles seemed to be tacit, and thus ideas of supervision were likely to vary between and within different professional groups.

The residents perceived that the best learning situations were those where they worked together with an experienced surgeon. In these situations, the resident operated together with and under the guidance of the senior surgeon. Learning through operating together makes excellent sense, since surgery is a procedure-focused field of medicine. The learning of clinical and invasive procedures (e.g. operations) is seen as an essential part of becoming a surgeon.

The residents liked to act together and to support each other. A resident who had advanced slightly further would instruct a less experienced colleague. The residents indicated that they conferred frequently with each other and shared experiences. Support and information were also provided by other healthcare professionals, such as the operating room's instrument nurse as described in Peter's case. However, the support offered by such professionals tended to be overlooked by residents. In contrast, the importance of peer support was noted by the residents.

All the residents had a supervisory relationship with their personal tutor. Yet the residents did not greatly emphasise the tutor's role in their learning. The tutor seemed to take on a general supportive role rather than helping with specific tasks. As one resident reported:

> Well, maybe the tutor is the first person you come in contact with, especially when you are new in the place, so he or she is the first one you can go and chat to. There will be questions about ways of working and so on … At least there's some designated man or woman that you can go to – that's the way it works.

As expected, the senior surgeons and the more experienced doctors were perceived as the most important people for supervising the newer residents. They provide role models for operations and for work in the clinical wards. Indeed, the more experienced surgeons functioned as role models for the residents all the time, as was mentioned by one resident:

> I'm learning all the time … when I work I get tips and clues and step by step I become more experienced.

More specifically, conducting operations together with a senior surgeon was described as the most important form of supervision and learning. Residents had experienced close guidance and more direct support, especially during operations, when a senior surgeon had assisted the operating resident. The residents' relationships with senior surgeons and other clinical workers seemed to range from feeling like outsiders to feeling almost like equal members of the team.

Difficulties in Self-Evaluation

Difficulties in self-evaluation were highlighted in the practice-based learning of the residents. As the experiences of Helen and Peter indicate, the residents had to evaluate what they could do and what they could not yet do. The evaluation of personal knowledge and skills was based on previous experience, including the success of one's work and the sense of security achieved. For example, it was a feeling of insecurity that steered Peter towards seeking help and support from more experienced colleagues.

The self-evaluation required appeared to be challenging for residents, as there was only limited feedback provided on resident's work. In fact, the feedback provided tended to be problem-based in nature. Resident received immediate feedback only when working, or when something went wrong.

Evaluation was described as something that was continuously carried out in practice, to assist tracking work outcomes. The evaluation and feedback provided by a senior regarding the clinical skills of a resident was concretised in terms of the amount of responsibility the resident was given in clinical work. As one interviewee reported:

> We are doing this work, and we move from one ward to another, so that the senior physicians get some kind of picture of everybody, maybe they chat about it among themselves, about the kind of people we are, but … every senior who is responsible or … every specialising doctor responsible for some matter, he'll decide for himself whether or not some specific individual can be given permission to do something.

Difficulties in self-evaluation arose from the fact that the residents did not have systematic opportunities to follow up their patients after surgery. Treatment relationships between residents and patients could be broken due to changes in the placements of residents in the surgical wards with different subspecialties. To enhance the feedback they could receive, a longer period of working within the same sub-specialty was suggested by the residents.

> We should be in the same place long enough so that it would be possible to see the implications for our work and for the future of the patients.

On the other hand, residents could acquire feedback if they actively sought it. They saw themselves as responsible for their own learning and skills development and for ensuring their learning. A few of them had actually done some detective work: they had obtained information on patients in relation to the operations they had performed.

CRITICAL REFLECTION

This research focused on practice-based learning in clinical settings. Utilising ethnography as a methodology, we analysed challenges experienced by surgical residents in their occupational practices during the first phase of their specialisation program. Our findings showed that the main challenges in surgical residents' practice-based learning include the haphazard and context-bound nature of the learning situations, conflicting and inconsistent supervisory/mentoring practices, and difficulties experienced in self-evaluation.

The haphazard and context-bound nature of learning situations is characteristic of work-based learning, and can also be perceived positively as manifesting the richness of practice-based learning (Collin, Paloniemi, Virtanen, & Eteläpelto, 2008). Seeing and experiencing authentic working life developed the residents' professional identity and their ability to respond to the challenges encountered in working-life situations. Overall, the context-bound nature of the surgical residents' learning environment needs to be accepted. However, it would be beneficial for the residents' learning if the workplace learning program could move to more deliberate guided learning strategies and to a better sequencing of access to activities, including monitoring/participating in operations and clinical work.

As Billett (2010) has demonstrated, individuals who can participate in new activities supported directly and enthusiastically by an experienced co-worker may have better learning outcomes than those who are only able to access routine activities, or who are denied support. In a hectic work environment, supervision

and teaching usually take a back seat to the job at hand. Nevertheless, we argue that it is precisely in such situations that opportunities for instruction in know-how and discussions with residents should be increased (Worthen & Berchman, 2010). Conflicting supervisory practices should be reorganised, for example in the ways in which participatory practices are addressed (see Billett, 2010). This would involve hospital staff gaining a better understanding of the ways in which the workplace includes residents in clinical work, and also of how the workplace offers guidance that is central to residents' practice-based learning.

The residents had difficulty evaluating their own skills and learning outcomes. This may be due to a lack of systematic or direct feedback. The senior surgeons evaluated the residents on their work outcomes and on this basis either enabled or prevented their access to new and more challenging practice-based learning situations. Worthen and Berchman (2010) questioned the legitimacy of such procedures, on the grounds that not everyone will have the same opportunities to enter into learning situations. They underlined the challenge learners face in pursuing learning situations, noting the extent to which this presupposes strong professional agency on the part of the learners. The turnover and temporariness of instructional relationships increases the importance of the learner's own willingness to take the initiative in these matters.

In any case, there appears to be a need for more a more systematic approach to instructing and mentoring in the course of the work if residents are to acquire the skills needed to become competent surgeons in their specialist field (see Silvennoinen, Mecklin, Saariluoma, & Antikainen, 2009). To achieve this objective, the evaluation of the residents' surgical competence needs to be taken seriously. Since there is likely to be considerable variation in residents' previous experience and education, it would otherwise be difficult to know and evaluate what a resident can actually do in practice.

It was also notable how far the notion of "what it is to be a surgeon" guided the learning of residents. Seeing and knowing different senior surgeons enriches this conception, and is beneficial for the development of the residents' professional identity. "Ways of being" provide a sense of agency that guides and directs residents' activities. It provides residents with notions of the real meanings of "what to do" and "what to be" (Dall'Alba & Sandberg, 2010).

On the basis of our findings, it seems appropriate to provide topics for further discussion. Such topics include questions concerning how to promote the agency of residents in the work community and how the entire work community can better contribute to enhancing residents' learning.

INNOVATIONS ARISING FROM THE CHALLENGES IDENTIFIED

Following our identification of the challenges faced by residents, some developmental work has been conducted in the hospital context where our data were collected. The hospital has founded a *Centre of Medical Expertise*, in which residents are provided with facilities to practise their surgical skills in a virtual learning environment. Moreover, residents are required to pass a "driving test"

before they are allowed to take part in certain surgical procedures (Silvennoinen et al., 2009). The challenges identified have been further addressed in that the senior surgeons acting as instructors have been given training in supervision skills. It has been recognised that supervision should be taken into account in the rosters of both the specialists and the residents, so that there will be enough time for goal-directed learning and for inculcating know-how. There have also been attempts to embed teaching within official procedures, making the instruction more overt.

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WILL LETTS

11. WORKING WITH PRACTICE COMMUNITIES TO CONDUCT TEACHER EDUCATION

An International Endeavour

> What I like most about the program is that you are in the classroom teaching two days a week for the whole school year and you also have teaching blocks. This format gives you the opportunity to build a relationship with not only the students, but also with your associate teacher. (Rob, 2010 BPES graduate)

Consistently on surveys and program evaluations our teacher candidates and graduates report that the most important part of our Bachelor of Primary Education Studies (BPES) program is the integration of in-school professional experience, or practicum, with the university coursework. This 9-month consecutive teacher education program, which builds upon a previously earned bachelor degree, prepares teacher candidates to teach from junior kindergarten to grade 6. Like Rob, many of our teacher candidates comment about the benefits of engaging in their teaching practicum in such close proximity to their time in the university classroom, and about the way this structure encourages a dialogue between these different aspects of their preparation to be teachers. In a similar way, Clift and Brady (2005) contended that the practicum was the most memorable part of their preservice program and described how it was critical to assisting preservice teachers to form their professional identities.

This chapter takes the BPES program as a case study in order to examine how we structure our program and our work to create and sustain powerful partnerships with the practice community of school education, to provide an authentic and meaningful teacher education program. Darling-Hammond (2006b) identified that an enduring criticism of teacher education concerns the perceived theory/practice gap between what happens in the university classroom and what happens in the school classroom (see also Korthagen, Kessels, Koster, Langerwarf, & Wubbels, 2001; Loughran, 2010). We have structured and organised our program in ways to explicitly redress this criticism, and to ensure that a reciprocal conversation takes place between theory and practice throughout our teacher education program. In this way, we honour the dialogical nature of practice and learning (in) practice (see Lee & Dunston, 2011). It is also worth noting that we don't take the notion of a theory/practice gap at face value, recognising that it is worthy of critique and can serve as a shorthand oversimplification of a more complex interaction. We do not conceptualise theory and practice as dichotomised and mutually exclusive

(Loughran, 2010). In what follows I describe aspects of the structure of the program, the learning communities approach to practice-based education (PBE), how internal and external standards shape and support our practice, and how being an Australian university (Charles Sturt University, CSU) with a campus in Canada assists us to internationalise our work.

PROGRAM STRUCTURE

Because "contemporary research suggests that learning about teaching develops through participation in a community of learners where content is encountered in contexts in which it can be applied" (Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005, p. 405) we have organised this degree to maximise teacher candidates' engagement with formal and informal learning contexts where their learning about teaching can be cultivated and applied. We are also cognisant of Darling-Hammond's call that "teacher education must venture further and further from the university and engage ever more closely with schools in a mutual transformation agenda" (2006a, p. 302). We recognise that increased time in schools, not only by our teacher candidates but also by our teaching and supervisory staff, allows us to work more closely with them, and it enables us to contribute to their professional learning and change agendas, not just to have our need for practicum places filled.

The program is structured so that teacher candidates spend 2-3 days per week on campus in university classes, and the remaining 2 days per week in a school classroom on practicum placement. Each term also concludes with a traditional teaching block, where the teacher candidates spend all of their time on a 3-week (term 1) or 4-week (term 2) teaching block. These intensive periods of planning and teaching are positioned to allow teacher candidates to consolidate all that they have been learning in the degree and to enact it in their professional practice, and afford opportunities "to organize prospective teachers' experiences so that they can integrate and use their knowledge in skilful ways in the classroom" (Darling-Hammond, 2006a, p. 305).

Seeking to redress the perceived theory/practice gap referred to above, Darling-Hammond et al. (2005) wrote that "many teacher educators argue that student teachers *see and understand* both theory and practice differently if they are taking coursework concurrently with fieldwork" (p. 401). Our program embraces the notion of coursework and practicum teaching happening contemporaneously, and capitalises both on the teacher candidates' recent time in the school classroom to draw out the ways, for example, they see theory in action, and on their recent time in the university classroom to offer new ways to think about and enact curriculum and pedagogies (e.g. Russell, 2007). In this we also acknowledge that initial teacher education "is a critical site of education for teaching practice, involving education about teaching as well as in and through 'practice teaching' itself" (Reid, 2010, p. 288). This is an important distinction, for as Reid noted, "educating for teaching practice means educating for teacher learning, and the continual change that characterises professional growth" (2010, p. 285).

Because our program embraces a learning communities approach to teacher education, a variety of nested learning communities can develop to support and enhance teacher candidates' learning. All the teacher candidates and the staff form the broadest learning community, and nested within that are learning communities on campus comprised of the smaller groups in which candidates take their classes, and the school-based learning community of other teacher candidates and their respective associate teachers, the site coordinator, and the faculty supervisor. This is taken up in more detail in the next section.

A PROFESSIONAL LEARNING COMMUNITIES APPROACH TO TEACHER EDUCATION

Our program, like the "powerful" teacher education programs explored in Darling-Hammond's (2006b) book, "involve[s] teachers in clinical work throughout the entire program" (p. 153) and is structured such that "clinical experiences are also tightly tied to simultaneous coursework and seminars that pose tasks and problems to be explored in the clinical setting and that support analysis and further learning about practice" (p. 154). Seeing our work as engagement with colleagues in a professional learning community also affects the ways we work with and consult with the profession.

Our professional experience (practicum) program is structured with a variety of roles to support the teacher candidates' learning, to create the conditions for a vibrant learning community to develop while on placement, and to enact the importance of building and sustaining relationships (e.g. Olmstead, 2007). We strive to place groups of 4-6 teacher candidates in the same school in order to have a critical mass that serves as the seed for a learning community. A teacher candidate, or sometimes two in the case of a paired practicum, is placed in a classroom with an associate teacher with whom they will work most closely for the duration of the term-long professional experience. Each school also nominates a site coordinator from its staff, who serves as the primary liaison between the school and the university, and who comes to meetings on campus six times per year to discuss aspects of our teacher education program and engage in professional learning sessions. Each teacher candidate also has a faculty supervisor from the university who visits at least three times per term to offer feedback, advice and support to the teacher candidate. All our full-time faculty members supervise teacher candidates on practicum, thereby keeping faculty connected to life in school classrooms and affording the opportunity for first-hand conversations with classroom teachers and principals. This is seen as a core part of our work as teacher educators. Five times each term the faculty supervisors meet with their whole group of teacher candidates as part of a practicum seminar, to consolidate learning from the seminar and contextualise it in relation to their experiences within their practicum classroom and school.

Beyond the practicum, there are other ways that we engage with the practice community of school education to sustain the dialogue between our program and the profession. We have a Teacher Education Advisory Committee whose

membership consists of university faculty, teacher candidates, Directors of School Boards and principals, who advise on issues related to program currency and quality. Our professional connections with the Boards where we place teacher candidates extend beyond just the practicum. We stay connected by offering and attending professional learning seminars, by participation in research projects initiated by one party or the other, and by having our program faculty serve on committees and advisory groups for the Boards, such as the New Teacher Induction Program, the Aboriginal Education Advisory Committee, and the Early Years Advisory Committee.

Framing the school-based practicum as a reciprocal act of learning – "both ways learning" as opposed to the more traditionally conceptualised unidirectional learning from school or associate teacher to the student teacher/teacher candidate – is significant. This strategy foregrounds that learning happens in dialogue and acknowledges that we hope associate teachers and the schools they work in also benefit from the practicum placement. We view the associate teachers and site coordinators as school-based teacher educators and valuable partners in the important work of teacher education that happens in both school and university classrooms (and beyond them). The structure of our program and the roles of people within it honour the notion of Cochran-Smith and Lytle that "learning from teaching ought to be regarded as the primary task of teacher education across the professional lifespan. By 'learning from teaching' we mean that inquiry ought to be regarded as an integral part of the activity of teaching and classrooms and schools ought to be treated as research sites' (1993, pp. 63-64). Conceptualising teacher education as an inquiry-driven process of "learning from teaching" means that our teacher candidates need to be thinking at once about what they are being taught (and are learning) and how they are being taught, and why they are being taught that way.

Our work-integrated learning model, which occurs concurrently with university study, allows both sites – the university classroom and the school classroom – to become sites for the enactment and attainment of the standards (discussed in more detail below) that frame our course. Thus, our teacher candidates are learning about practice *in* practice, so that we are "entwining carefully designed clinical experiences early and throughout the program" (see Darling-Hammond et al., 2005, p. 401).

GOVERNED BY INTERNAL AND EXTERNAL STANDARDS

To support our work with the practice community of school education, and to contribute to our program framework, we use both internal and external standards as reference points and touchstones to shape our work. The internal standards we reference are CSU's *Standards for professional and practice-based education* (Education For Practice Institute, 2011). These standards not only serve to provide a common framework of reference for PBE across all of CSU, they also provide a means of reflection for our program team on their performance and contribution to the quality of this practice-based program. Although these standards are presented

across four key areas – course learning outcomes, teaching and learning activities, course infrastructure, and university infrastructure – for the purposes of our discussion about working with practice communities, we focus here on *course learning outcomes* and *learning and teaching activities*.

In relation to course learning outcomes, two dimensions of these standards particularly inform our work with the teaching profession. The first is *professional judgement*, where the standards discuss critical and creative decision-making in practice-based contexts, ensuring that work-related decisions are aligned with professional values and expectations, and demonstrating accountability for the decisions made and actions taken. The second dimension is *professional competence and work readiness*. This encompasses standards related to demonstrating capabilities of a beginning practitioner/professional, integrating discipline, practical and social knowledge into professional practice, and demonstrating an understanding of the legal and ethical requirements and boundaries of the profession.

The learning and teaching activities dimensions against which we benchmark are *PBE teaching and learning activities* and the *inclusion of work-integrated learning/workplace learning activities*. The PBE teaching and learning activities dimension encompasses standards related to having learning/teaching activities explicitly demonstrate their relevance to practice, utilising a range of teaching strategies other than teacher-led activities, and learning activities that include consideration of and opportunities to engage with relevant stakeholders within practice communities. The inclusion of work-integrated learning/workplace learning activities dimension calls for providing workplace learning opportunities to gain real-world experience and to provide work-integrated learning strategies to bring the practice world into the classroom.

The external standards that are part of our program framework are articulated by our accrediting agency, the Ontario College of Teachers. The College has two sets of standards – *Standards of Practice for the Teaching Profession* (2006a) and *Ethical Standards for the Teaching Profession* (2006b) – that shape the work that we do and the way we interact with the profession. The former encompass professional knowledge, professional practice, commitment to students and student learning, ongoing professional learning, and leadership in learning communities. The latter encompass care, respect, trust and integrity.

The internal standards speak most directly to the work that we do as a university and how we connect learning and our students to practice communities through our curriculum, pedagogies and policies. The external standards position our students as emerging professionals and describe what their interactions with teachers and students in the practice community of school education should look like. Collectively, these standards form the basis for our work with professional communities, including but not limited to the teaching profession.

AN INTERNATIONAL ENDEAVOUR

As an Australian university with a campus in Canada (where the BPES program is offered) we are uniquely positioned to take full advantage of positioning and advocating for teacher education as an international endeavour. Although our students come from Canada (when they enrol, although they have a diverse range of countries of origin), our teaching staff is a combination of individuals seconded from our Faculty of Education in Australia, from local school boards in Ontario, and directly hired in Ontario. This unique mix of faculty, in terms of geographic origins, roles within the education sector, academic backgrounds and recent professional experience, helps to heighten the program's attention to international contexts, frameworks, and opportunities. And although we are governed by local policy and teach local curricula, we are still a campus of an Australian university that brings with it to Canada many policies and practices that afford us an opportunity to compare and contrast the Canadian legal, policy and curriculum landscapes with those from Australia. So our program, although offered with the consent of the Minister of Training, Colleges, and Universities in Ontario and accredited by the Ontario College of Teachers, allows us to inhabit a hybrid space that encompasses but exceeds the requirements of Ontario.

Our work is an international endeavour not only because our university has campuses in two countries. Global citizenship is a value that underpins our program framework and that both informs and is infused into all our programs. In relation to the BPES, this value entails an appreciation of the ways that culture and history (our own and that of others) affect our behaviours, beliefs, and relationships in a multicultural world. Moving in concert with and beyond the powerful but partial mantra of "think globally, act locally," global citizenship takes account of relationships, intercultural competence, global perspectives in the curriculum, the literacies of global citizenship (as a facet/aspect of multiliteracies), and envisioning the global classroom.

Pondering and teaching about global citizenship also compels us to acknowledge the importance of *place* when thinking about teacher education, and the importance of perspective and practising teachers being able to read place and appreciate the importance of acknowledging place. Such a place-consciousness (Gruenewald, 2003; White & Reid, 2008) also enables teacher candidates to discover when policies, curricula or even pedagogies are metro-centric or Euro-centric, for example, and to devise strategies to mitigate the effects of such an orientation. As part of the social justice agenda of global citizenship, we can work with our partners in the field of practice of school education to reveal such biases and strategise how to overcome or eliminate them.

LESSONS FROM TEACHER EDUCATION

It bears mentioning that all our work in teacher education with practice communities occurs against a backdrop where "teachers bring to their work their own idiomatic school biography, the conflicted history of their own deep

investments in and ambivalence about what a teacher is and does, and likewise they anticipate their dreams of students, their hopes for colleagues, and their fantasies for recognition and learning" (Britzman, 2003, p. 3). That is, none of this work happens on blank slates, empty canvases or in an uncharged context. Instead, all of us involved in these endeavours bring both baggage and affordances, histories that are vexed and that facilitate our learning, and aspirations that can both energise and motivate us, but which might also position us for disappointment or frustration. In this complex work, the simultaneity of these seemingly contradictory states and emotions offers us challenges in this work, but also incredible opportunities and possibilities. Like few other professions, we experience a reversal of roles as we learn to be teachers, for we have all had teachers and been students, and teacher education with practice communities flips this so that we eventually are teachers and have students. And in the middle of this process (minimally) we are simultaneously teachers and students.

While the example in this chapter is of a teacher education program, it contains aspects that would be germane to programs that prepare practitioners in other professions. At the heart of this work is learning (about) a profession while participating in that profession – from near and afar, from within a university classroom and at the site of teaching practice, in this case the school classroom. In such practice-based professional education the structure of the program matters in order to facilitate optimal conditions for learning *about*, learning *in*, and learning *for* practice (Reid, 2010) to occur. The program's orientation towards and relationship with the practice community is an important enabler of the professional learning that can be jointly undertaken. A framework of standards (or a few!) to both underpin and serve as a touchstone for the learning and teaching in the degree is important, as are the value orientations that the program embodies, that shape and guide the professional education program. Collectively, these features contribute to PBE that integrates conceptual and practical work and acknowledges and responds to their interdependencies.

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12. EDUCATING TOMORROW'S TEACHING PRACTITIONERS

An Innovative Program to Improve Teaching and Scholarship in the Health Professions

THE SETTING

Creighton University is a Jesuit university, rooted in the Catholic tradition, located in Omaha, Nebraska. It is a complex institution, with a broad range of professional education programs that brings together on one campus nine different undergraduate, graduate and professional schools. Despite the complexity, there is a rich tradition of faculty collaboration and interprofessional engagement. This is particularly true within the health professions programs.

In 2005, associate deans for education from the Schools of Medicine, Nursing, and Pharmacy and Health Professions, along with the Director of Medical Education Development and Assessment from the School of Medicine, convened to explore the possibility of a collaborative faculty development opportunity. At the time, both the Schools of Medicine and Pharmacy and Health Professions had independently examined models for teaching academies and were interested in creating structures to promote the development of teaching and assessment of student learning and performance, disseminate effective pedagogies, foster a community of teaching practitioners, and nurture the scholarship of teaching and learning (SoTL). We were particularly interested in creating an intentional opportunity for faculty in health professions programs to meet and discuss topics and pedagogies unique to teaching and learning in health professions, such as teaching and assessing clinical skills. In particular, we recognised that health professions faculty share a common, signature pedagogy, "learning in the practice settings of the workplace" (Harris, 2011, p. 43). Signature pedagogies are important because they are pervasive and define how knowledge is transmitted, analysed, criticised, accepted or discarded (Shulman, 2005, p. 54). We determined that an intensive, multi-day workshop or retreat, open to novice teachers from all of the health professions programs, would best accomplish this goal. The program we envisioned would complement existing school and program sponsored activities, draw upon the resources of the university, and enlarge our individual school efforts. In 2006, Creighton University Schools of Medicine, Nursing, and Pharmacy and Health Professions introduced the Summer Initiative for Teaching Excellence in the Health Professions, known informally as the SITE program.

THE FOCUS

The competing demands on teaching practitioners have never been greater across clinical practice, research, teaching and service. Leaders at our institution are committed to ensuring adequate preparation for teaching, assessment and educational scholarship. The curricula of the health sciences schools are revised continuously to respond to the changing demands for preparation of competent health professionals and accountability, and to incorporate new teaching and assessment methods and technological innovations. These changes are propelled by the evolution of curriculum content, new theories of learning, scientific discovery, evidence about student learning, accreditation standards, an increasingly competitive education marketplace that demands evidence-based approaches to teaching and assessment, and increased demand for health professionals who can work effectively on teams and are collaboration-ready. This changing environment requires us to have faculty teaching expertise that can meet the demands of a changing curriculum. Apart from changing curricula, as tenure and promotion criteria place greater emphasis on teaching effectiveness and evidence of student learning outcomes and performance, faculty may be required to supply evidence of teaching effectiveness.

Unfortunately, although health science faculty members are highly trained in their professions, most have little formal training in teaching, learning and evaluation methods. According to the Survey of Doctoral Education and Career Preparation (Golde & Dore, 2001, pp. 21-24), a national survey of doctoral students in the United States, slightly fewer than half of the doctoral students (49.8%) reported opportunities to assume progressively more responsible teaching roles during their doctoral education. Similarly, only 51.2% reported that their program provided a workshop on teaching in the discipline. For having received preparation to teach lecture courses or graduate courses, the responses dropped precipitously to 36.1 and 23.3%, respectively. Although this report and others sparked efforts by universities to prepare graduate students to be effective teachers (Austin et al., 2009), many new faculty still begin academic careers without adequate preparation to conduct scholarly teaching or rigorous evaluation of student performance, or to assume education leadership roles (Gale & Golde, 2004). Many new faculty in the non-physician health professions make a transition as experienced clinicians and move into an academic setting. Faculty members who possess teaching experience also require ongoing faculty development opportunities to refine pedagogical methods, adopt new assessment strategies and improve educational scholarship. Although the number of master's degrees in education targeted to health sciences faculty is growing, and some are offered online, this option appeals to only a small segment of health sciences teaching faculty.

Despite limited preparation to teach and serve as educational leaders, health sciences faculty must address unique structural challenges compared to other higher education settings: faculty time available for teaching is limited; faculty preparation models emphasise research; curricula are typically integrated; multiple

settings are used for teaching and learning; teaching often occurs in a clinical practice setting with actual patients; and evaluation of learning often requires performance-based assessment. These challenges also create barriers to scholarship for health sciences faculty (Smesny et al., 2007).

Prior to the initiation of the SITE program in 2006, faculty development to improve teaching and educational scholarship was provided separately by each health sciences school at our university, and complemented by university-wide opportunities offered by the Division of Informational Technology and the Office for Academic Excellence and Assessment. Opportunities for interprofessional faculty development at Creighton University were ad hoc. The need for intentional, structured faculty development opportunities was apparent to educational leaders at our institution.

Not coincidentally, literature on teaching academies and related models for recognition of the teaching mission and a targeted effort to reconsider our traditional notions of what counts as scholarship was emerging near this time, providing evidence for the need for structural approaches to support teaching and promote educational scholarship (Irby, Cooke, Lowenstein, & Richards, 2004; Shulman, 2004). Reports of academies have suggested that as well as benefits to individuals, such as instruction and mentoring, there are benefits to the institution, such as improved teaching and assessment, increased educational scholarship, and increased visibility for the teaching mission. Although we did not pursue development of an academy of educators, our planning was influenced by this movement.

THE STRATEGY

Creighton University Schools of Medicine, Nursing, and Pharmacy and Health Professions (Occupational Therapy and Physical Therapy) introduced the SITE program in the Health Sciences in 2006. The School of Dentistry participated in subsequent years. The SITE program is a collaborative, intensive, and interprofessional program designed to give faculty an opportunity to engage in study, conversation, work and reflection about teaching and learning. SITE introduces faculty to the scholarship of teaching and learning, and provides opportunities for faculty to advance their teaching and educational scholarship.

Faculty from all health professions programs may participate. Applicants are required to secure from their department chair release from all clinical obligations to ensure attendance and full participation at all program sessions, including working lunches. To promote participation by physician faculty, we applied for continuing education credit through the Division of Continuing Medical Education in the School of Medicine. The Accreditation Council for Continuing Medical Education has offered AMA Physician's Recognition Award Category 1 credit for this educational activity. We do not charge participants for participation in the SITE program or for continuing education credits.

At most four faculty members from each of the health sciences schools are accepted each year. Although the program is targeted to new faculty members,

faculty with teaching experience may also participate. Since the program's inception, 53 faculty members have participated, representing dentistry (7), medicine (21), nursing (12), occupational therapy (5), pharmacy (3), physical therapy (3), and other health sciences (2). A critical dimension of the program is the interprofessional learning community. The interactions across the professions in the discussions and deliberations are an essential component of this "community of practice" (Harris, 2011, pp. 42-43).

We selected an intensive, workshop-style format to promote attendance and full participation by faculty who might otherwise be unable to attend faculty development activities during the typical workweek (e.g. faculty with clinical responsibilities off campus). In the first year we offered the program as a 3-day program, and reconfigured the schedule to a 2-day format for subsequent years after consideration of feedback from participants and facilitators. All SITE program sessions are conducted on the Creighton University campus and lunch is provided daily. A team of core faculty from each of the schools provides oversight for the program. Administrative support is provided by the Office of Medical Education in the School of Medicine. Each school contributes funding to cover lunch, materials, and 4-5 key books on teaching, learning and assessment for participants.

In preparation for the program, SITE participants are asked to come prepared to be actively involved, and are reminded they will spend their time reviewing principles of learning and development, discussing teaching and learning issues with colleagues, and developing instructional strategies to design new courses or enhance existing courses. We also request, in advance of the program, that they complete an online assessment of teaching goals, reflect upon their teaching goals and prepare to contribute to discussion of teaching philosophies, innovation, and best practices.

The objectives for the SITE program are to improve teaching and learning by providing opportunities for faculty to develop skills for effective teaching and assessment; to promote the scholarship of teaching and learning and the dissemination of educational innovations; to recognise achievement and excellence in teaching; and to develop educational leadership.

The SITE program offers a variety of formats for learning, including group presentations, seminar-style discussions, and individual reflection and project time. An important component of SITE is the initiation of an individual project, such as revision of an existing syllabus or development of a new assessment method. Participants are required to submit a brief proposal with their application. On the first day of the program, half of the participants present their proposals and receive feedback from the group about all aspects of the proposal, including design, feasibility, potential for scholarship, and suggestions for collaboration or resources. The remaining participants share their proposals and engage in the peer review process on the second day of the program. Additional meetings are scheduled throughout the academic year, and participants are expected to report on the progress of their projects at these meetings and engage in continued peer review

and discussion. This project focus provides an opportunity for engagement in the learning process throughout the year.

Creighton University faculty and staff serve as facilitators and presenters, including faculty from the Schools of Medicine, Nursing, Pharmacy and Health Professions, Dentistry and the Graduate School. Each year the program begins with a welcome from one of the health sciences schools deans. This seemingly small gesture underscores their unified support for the program, a significant contributor to the continued success of the program. The deans typically share a brief story or remarks to emphasise the importance of preparing faculty for their role as teaching practitioners.

The SITE program curriculum addresses philosophies of teaching and learning, instructional design and development, construction of learning goals and objectives, assessment methods, and strategies for teaching in lecture, small group, and clinical settings. In 2011 we introduced a hands-on session for simulation-based education to demonstrate effective pedagogy for teaching, with task trainers and mannequins and strategies for performance-based authentic assessment.

The two-day program is organised into three components:

– Component I: Who Are Our Teachers and Learners?
– Component II: Toolkits for Teaching
– Component III: Teaching as Inquiry.

Session titles for each component are listed in Table 12.1.

CHALLENGES FACED

We encountered four challenges to the design and implementation of the SITE program. First, we found it difficult to identify program dates that would not conflict with important events in a single school or program. Each school or program operates on a different academic calendar, including unique variations for clinical, summer school, and faculty development activities. We also found that faculty interest and availability varied by contract type, health sciences faculty being engaged for 9-month, 11-month, or 12-month contract periods. A faculty member on a 12-month contract might prefer to participate in the SITE program during the summer months, whereas a colleague with a 9-month contract would not be available during the summer period. We offered the inaugural SITE program in August, hypothesising that all faculty would be available at that time and motivated by the upcoming academic year to participate in the program. However, after the initial implementation of the program, we received feedback from current and prospective participants that August was too near the start of the new academic year. In the second and subsequent years, we offered the program in early June. This was received favourably, and participants reported that they completed the program prior to summer vacations or non-contract time. Some participants also noted that it was valuable to have the 3-month period prior to starting the academic year so that they could plan or implement their project in time for the new academic year.

Table 12.1. SITE program sessions

Component	Sessions
Who Are Our Teachers and Learners?	Developing a philosophy of teaching and learning
	What is good teaching?
	Knowing your learners
	Creating goals and objectives
Toolkits for Teaching	Strategies for teaching large group classes
	Strategies for improving small group teaching
	Assessing student learning in the health professions:
	– Strategies for formative assessment: Classroom assessment techniques
	– Strategies for summative assessment: Creating exams
	– Strategies for online assessment
	Clinical assessment in the health professions:
	– Standardised patients
	– Simulation-based education
Teaching as Inquiry	Introduction to SoTL
	SoTL in practice: Examples of educational scholarship

A second, and more significant challenge, was developing a curriculum that was interesting and relevant to faculty who represent a diversity of teaching responsibilities. Since the program's inception, participants have included faculty from across all health professions programs (dentistry, emergency medical services, medicine, nursing, occupational therapy, pharmacy, physical therapy). Within these disciplines, participants teach in numerous settings, including research laboratories, clinical or field settings, simulation and clinical assessment centres, traditional classroom settings, and distance education settings (both online and teleconference formats). Practice-based sites range from large academic teaching hospitals to community-based clinics to small rural sites.

The third challenge is the limited time period. The 2-day format for the introductory program foundation does not afford time for participants to practise teaching in these settings and receive feedback. Ideally, participants would have time to try new strategies, receive formative feedback from peers and facilitators, and discuss specific strategies for improving teaching and learning.

The 2-day format for the program also offers several advantages. Participants perceive it as a reasonable time commitment, and even colleagues with clinical responsibilities have indicated they can be away from clinic for 2 full days. This is evident in the consistent participation of clinical faculty. Although brief, the immersive format promotes engagement during the program, and participants have

reported feeling energised by the opportunity to meet colleagues from outside their school and to focus exclusively on their teaching during the program.

A final and ongoing challenge is sustaining the enthusiasm and innovation fostered during the program. Unlike some longitudinal teaching and scholarship programs, however, we did not require a commitment of attendance for the year-long sessions as a condition for participation in the SITE program. In fact, we were concerned that requiring participation in a year-long program might discourage enrolment in the program. As a result, scheduling monthly sessions was not feasible and we found that scheduling one or two meetings each semester was the most effective model. At the sessions, typically held at lunch or dinner with a light meal provided, participants provide updates on their teaching and the projects they initiated at the SITE program. We also arrange for a brief presentation or discussion at these sessions. Examples from previous years include navigating the Institutional Research Board for educational research; dealing with difficult learners; and finding resources to support educational innovation and scholarship.

CRITICAL REFLECTIONS

Since the program's inception, 53 faculty members have completed the program. We conduct evaluations annually, at the conclusion of each program, and feedback from participants has been overwhelmingly positive. Program evaluation data collected from these evaluations, along with data collected during focus groups in 2009, confirm the need for the program and for foundational teaching skills content. Participants have reported that the program provided them with specific tools and strategies they could employ immediately in their teaching. Some participants have even commented that the program should be required for all new faculty members.

We continue to see indications of increasing acceptance of the importance of the SITE program as part of institutional culture. For example, deans and department chairs now recommend the program to new faculty. Furthermore, participation in the program serves as widely-recognised marker of knowledge of core principles of teaching and learning. After 6 years, faculty in the health sciences schools now recognise that past participants, i.e., alumni of the SITE program, share a common understanding of curriculum mapping, assessment principles, and the tenets of the scholarship of teaching and learning. This, in turn, has enriched campus dialogue around SoTL and raised the bar for expectations of teaching quality and learning outcomes. Moreover, the opportunity for faculty to interact across health professions as a learning community establishes relationships for future dialogue and collaboration.

The curricular and scholarly outcomes of the program also demonstrate the benefits of the program. We conduct an annual survey of scholarly activity, and ask program alumni to note curricular activities and educational scholarship that resulted, at least in part, from participation in the program. The result is a lengthy and growing list of curricular innovations, assessment methods, journal articles, book chapters, and conference presentations resulting from participation in the

program. Some participants have listed participation in the SITE program in their dossier for tenure and promotion, intended as evidence of their commitment to improving their teaching and scholarship. As the number of SITE alumni continues to grow, and their collective record of accomplishments swells, we have been able to invite past participants to serve as facilitators and panellists during the program.

The intensive 2-day SITE program is an effective model and we will continue to offer the program. The majority of the faculty who teach in our programs were not prepared formally to be educators or to engage in teaching as a scholarly activity. While we have every confidence in their preparation for professional competence within their respective disciplines, it is incumbent upon colleges and universities to ensure that faculty, as teaching practitioners, are ready to effectively direct student learning and preparation for practice roles after graduation. We encourage other schools to consider this approach for improving teaching skills and developing a community of health science educators.

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13. AN EXAMPLE OF INTERPROFESSIONAL CURRICULA

The Linköping IPE Model

THE SETTING

The "Linköping IPE model" at the Faculty of Health Sciences, Linköping University in Sweden has now yielded over 25 years of practical experience and development of interprofessional education (IPE) curricula. It is one of the first systematic attempts to organise IPE academically (Areskog, 1994; Wilhelmsson et al., 2009). Before 1986, medical students at Linköping University spent their first 2 years of preclinical training at the University of Uppsala and the last 3½ years in Linköping, following a conventional medical curriculum. The prospect that the government might shut down the Uppsala–Linköping collaboration in medical education started a process of re-evaluation of the education of health and social care professionals in Linköping. Social care, nursing, biomedical science, occupational therapy and physiotherapy (Areskog, 1988, 1992) had at the same time been established as educational programs within the faculty. In order to begin a complete and also innovative medical education program in Linköping, the university and the county council cooperated in creating a common organisation and education for the different health education programs. One of the fundamental principles in the committee work was that the whole faculty should participate in the development. The proposal from the committee was derived from an analysis of plausible "trends in the future Swedish society." The committee stated three main strategies: the pedagogical approach would be problem-based learning (PBL), there would be early patient contact, and there would be a 10-week IPE module at the beginning of education for all programs (Areskog, 1995).

FOCUS

After some years the IPE curricula were redesigned, partly by launching student training wards and partly by revision of the first introductory module (Wahlström, Sandén, & Hammar, 1996; Wahlström & Sandén, 1998). The new leaders wanted to develop and modernise the faculty and the IPE modules were regarded as being too indistinct in certain aspects. Since the IPE curricula are part of all programs, development of new IPE curricula had to involve the whole faculty. A group of stakeholders and representatives from the programs and students' union began a joint process of renewal of the IPE curricula. The assumption that gaining

interprofessional competence is a process that occurs over time, as shown in Figure 13.1, together with a focus on public health and epidemiology, were starting points for the group. A series of student evaluations and the vast experience and knowledge accumulated in the group of tutors were resources in the process. The work ended up choosing three themes: health, ethics and learning (HEL). The first IPE module was condensed to be 8 weeks at the beginning of education, with the intention to start a new 2-week IPE module in middle of the education and finally a 2-week placement in the student training wards, totalling 12 weeks of IPE curricula (Wilhelmsson et al., 2009). The faculty presently offers seven programs (medicine, medical biology, biomedical science, nursing, occupational therapy, physiotherapy, and speech and language pathology).
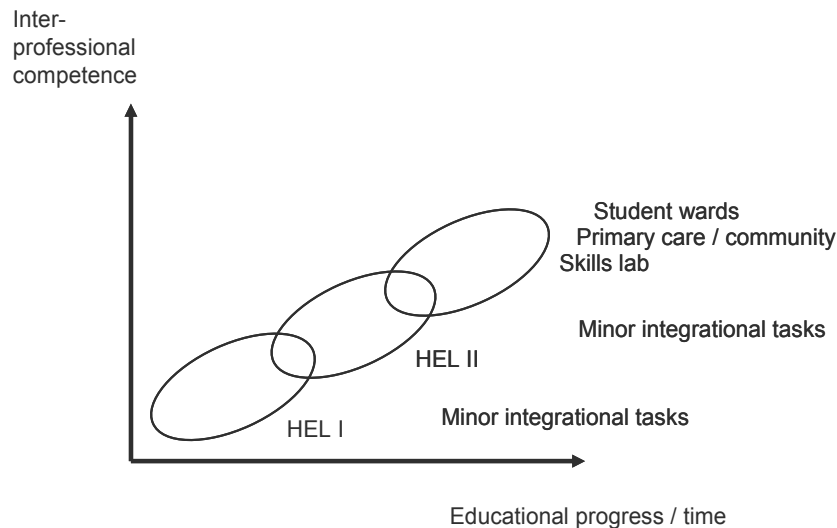
Figure 13.1. Comprehensive interprofessional learning in "The Linköping IPE model."
Three steps can be identified as early, middle and final IPE

THE STRATEGY

The aims of the first step, HEL I, are to establish a base of common values and competencies. Although the students at this early stage have not yet established any professional skills, the module is intended to be a platform and common value basis to facilitate IPE. Understanding the multifactor concept of health, problem solving in groups, and analyses of ethical dilemmas on individual, group and societal levels are examples of learning issues in the course. It also contains interpersonal meetings in PBL groups of 7-8 students, at least 2 hours twice a week, systematically evaluated in several perspectives by the participants and their

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tutor. Organisation of the work in the group, problem solving, productivity, dealing with conflict, individual and collective contributions, and needs for improvement are examples of issues that may be addressed in the evaluation part of the PBL sessions.

In the first module, HEL I, students are given tools such as problem solving, working in small groups and self-directed learning via PBL, developing knowledge and language together to build a common value base. In their first year the students have an unsettled professional identity based on prejudices and assumptions, and are faced with the task of investigating sets of professional values. By discussing professional culture in small groups the students begin a process of becoming aware of attitudes and roles in today's health and social care systems. A new 2-week IPE module was developed titled "Health, Ethics and Learning part 2" (HEL II). During their fourth or fifth semester, students from all programs again participate in an integrated module with a specific theme. The theme chosen was sexology. Sexuality was not treated as a prominent part of wellbeing and quality of life within the undergraduate health science programs, in spite of the fact that it is considered as an important aspect of a holistic view of humans. In professional practice it is seldom addressed, and if it is, it is rather referred to specialists in specific cases. "Human sexuality" cuts across all programs and encompasses many aspects of health, ethics and learning. It also appeals to the interest, experiences and opinions of many students.

The aims of the second module HEL II are to gain complementary professional competencies and thereby to test and consolidate students' professional identity as a prerequisite to working in interprofessional settings. In the module, the same problems are processed from different professional perspectives in tutorial groups. Every student also presents a role-play to illustrate a realistic professional situation in which sexuality is involved. A concluding written assignment specifically addresses reflection on professional and interprofessional competence in relation to the subject sexology.

By midway through their education students can reflect on their own profession as opposed to other professions and thereby discover its core and specific features. An example of a learning situation is assignments where students report on a complex patient case and discuss and evaluate the reports in seminars. The students are thereby trained in reflection, documentation and evaluation in the IPE groups. Ethical aspects connected to the patient case are also addressed. The process involves comparisons of different situations involving different actors in different contexts. Hopefully, students can thereby feel the strength of the interprofessional group's enacting and developing professional as well as interprofessional competence.

The third module of the "Linköping IPE model" is a 2-week placement at a student training ward late in the program. The purpose is to test and establish collaborative and interprofessional competences in a realistic milieu. Students present themselves and are considered as professionals in the team, although under highly skilled supervision. In the student training ward during the last semester the students are using their skills, theoretical knowledge and practical experiences, and

testing their applicability in "real-life" scenarios. The students at this stage are professional and more capable of learning with, from and about each other. They work in teams as professionals with well-developed interprofessional skills, acknowledging different professional, organisational and disciplinary views.

On the training wards students organise and evaluate the interprofessional teamwork daily. Working with real patients provides a learning opportunity for students to discover the importance of a well-functioning team. As students are allowed to organise the work, they are encouraged to reflect on how to share different tasks between professions so that patients are the ones to benefit from a well-functioning interprofessional team. Well-functioning interprofessional student teams can be regarded as communities of practice (Wenger, 1998). The evaluation process after a working day provides both good and bad examples of how to work and possibly leads to new views on how to work tomorrow.

Other opportunities for interprofessional student training and practice are found in the local community and primary care, in addition to competency training at skills labs at the University Hospital. Small-scale modules are organised within the scope of the different programs. Cooperation between occupational therapy and civil engineering programs is one example, where students from the two programs work together to design technical aids for the functionally disabled.

CHALLENGES FACED

In a national independent evaluation, the Swedish Medical Association has annually asked all newly examined doctors in Sweden eight central questions about how their undergraduate education has developed their skills and abilities for their future medical specialisation. The eight issues thus addressed are being prepared to work as a doctor, cooperation with other professions in health care, leadership, communication with patients, readiness for lifelong learning, interest in research, medical handling of acute patients, and practising preventive care. The newly educated doctors at Linköping University exposed to both PE and PBL report significantly more confidence that their undergraduate studies have given them interprofessional skills and abilities to cooperate with other professions than medical students from the other medical faculties in Sweden. These results have been consistent for many years (Faresjö, Wilhelmsson, Pelling, Dahlgren, & Hammar, 2007). Using the same research approach and the same instrument, four nursing programs (two with IPE curricula and two without) were evaluated in 2009, with the same results as in the medical group. Nurses with IPE curricula think that they have been better prepared to work together with other professions (Wilhelmsson, Svensson, Timpka, & Faresjö, in press).

Statistics from the Swedish National Agency for Higher Education have shown that students graduating from the Faculty of Health and Sciences in Linköping are sought after in the labour market and easily find employment (Swedish National Agency for Higher Education, report 2006:40R). IPE is only a beginning of collaborating interprofessionally in practice, training/having interprofessional competence or collaborative competence. For advancement in IPE the process of

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being interprofessionally competent must continue in daily clinical work, a sort of lifelong learning.

In an evaluation of the first year at the student training ward students reported appreciation of insights into the competence and skill of other professions (Fallsberg & Wijma, 1999). In interviews students focused on the integrated teamwork and how they made use of everyday activities to collaborate and understand each other's competence. Students integrated by applying three different strategies: delegation, differentiation and discussion (Fallsberg & Hammar, 2000).

Medical and nursing students at two Swedish universities were invited to fill in the Readiness for Interprofessional Learning Scale (RIPLS). Regardless of the educational program, female students were more positive towards teamwork than male students (Wilhelmsson, Ponzer, Dahlgren, Timpka, & Faresjö, 2011). Nursing students in general displayed more positive beliefs about teamwork and collaboration than medical students. Exposure to different interprofessional curricula and previous exposure to interprofessional education were only to a minor extent associated with a positive attitude towards teamwork. Educational progress did not seem to influence these beliefs (Wilhelmsson et al., 2011).

CRITICAL REFLECTIONS

There are several important factors which today merit renewed attention, further research and possible interventions of interprofessional education and practice. Nations in the 21st century are becoming increasingly multiethnic and multicultural, with a high degree of mobility and aging populations. Europe, for instance, has the highest proportion of old people in the world. These trends carry implications for the organisation, delivery and cost of health and social care, thereby putting practising professionals under increasing pressure to respond to more complex problems. It requires interprofessional competence to respond effectively and to realise the ideals of holistic care and treatment. Taking a holistic approach to patients necessitates the use of such tools as problem solving and critical thinking. This means that professions in health and social care need to define new roles and create new cultural patterns to ensure patient/client-centred care and to strengthen the clinical pathway. Collaboration between professions is especially important in rural and remote areas, where the available health care resources are often relatively scarcer than in urban areas (Faresjö, 2006).

A general trend in health care worldwide is a transition from hospital care to primary care due to a growing understanding of the value of prevention. Apart from this, rising health care costs, advances in medical technology and changes in demography contribute to the fact that the local community is now the locus of care for an increasing number of patients and users. Bridging health and social care as well as community and hospital care is critical (McNair, Stone, Sims, & Curtis, 2005).

In the post-industrial society, individuals are exposed to a never-ending explosion of knowledge which is easily accessible, not least advice about health

and health-promoting behaviour. The individual as a consumer, not only of goods but also of knowledge, is better informed, more demanding and sometimes more critical. The explosion of knowledge also influences traditional professional boundaries. Emerging new specialties within professions and fields of collaboration between professions challenge old structures and behaviours. Also, evidence-based health care deals with professional problems but allows answers that do not consider borders between professions (Nancarrow & Borthwick, 2005).

Rising expectations with finite resources and sometimes shrinking staffing in health care organisations exacerbate stress, calling for new ways of working together to set limits on the demands made on any profession in order to spread the load and build in mutual support (Hertting, 2003).

The following is not a description of "how to do it" but rather summarises our experiences for successful implementation of IPE. It is important to underline that IPE in different ways is criticised and challenged even within our organisation, and that the underlying principles and design need constant and vigilant scrutiny and reform. The most fundamental issue is that the organisation and Faculty endorse IPE. A positive attitude toward IPE within the faculty from the Dean and professors, lecturers and teachers is one of the main prerequisites for favourable reception of the interprofessional project among students.

- Constantly evaluate, revise and discuss IPE in the organisation and, in that process, remind all stakeholders of the general goals of IPE, namely interprofessional practice. Every organisation needs to be able to shift focus and address questions of different magnitude in everyday work, but not lose sight of the long-term objectives.
- There is a need for leadership with enough interest, knowledge and preferably experience to legitimate IPE. Indeed, IPE is the art of the possible, and levelling all kinds of interests is one of its main features in the organisation as well as in enacting it.
- Organisers of IPE certainly need diplomatic and interprofessional skills, constantly listening to all actors involved, arranging regular meetings with discussions on curriculum and content, seriously considering all perspectives of the subject. Process leadership is desirable. Support from and close contact with faculty leaders in relevant positions is essential for success.
- All programs involved in IPE must have a sense of ownership based on true influence and a conviction that IPE contributes to the positive formation of professionals of today. The material in the IPE curriculum must be selected carefully and designed to fit well with organisational and logistical aspects in order to be significant within the programs. The involvement of faculty members from the different programs in the IPE activities is crucial, as they will be mediators in conflicts of interest and, hopefully, knowledgeable defenders in difficult times. They have a distinct role as co-designers of IPE activities, and in the group of lecturers joined to solve common problems, true interprofessional learning will take place, thus adding to the critical mass of experience needed to propel the project over time.

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– Students and students' unions must be involved in the process. Students in the latter part of their education who have had full experience of the IPE curricula are important contributors when re-organising. They have great influence as role models and ambassadors for first year students and reluctant members of the faculty. Former students, who have had the opportunity to test their competence and reflect on the importance of their basic training, may turn out to be the most influential advocates of IPE.

– Small group learning, whether intra- or interprofessional, contributes considerably to the understanding of the "other," as a person, a professional or a representative of disciplines and organisational entities. Interprofessional skills cannot be taught by others, but must be learned in interaction with others.

– Our experience is that faculty members are key actors for successful IPE. Their engagement in IPE encourages their students to be engaged in IPE and in turn IPE is successful. Based on the outcomes of evaluations with both students and teachers we have re-organised the IPE (Wilhelmsson et al., 2009).

Can the designer of a curriculum design it so that the students can be trained to become more or less interprofessionally competent? It is very difficult to fully understand what outcome the curriculum will provide; one can only speculate. But carefully thinking through how to train the students, as described in this chapter, will perhaps be more effective.

The construction of IPE curricula has a key role if the IPE training is to be successful. The interprofessional learning situations exemplified in this study may be helpful tools for IPE educators and for developing professional practitioners with a focus on patients' problems from more than one profession's perspective. In the end, the overall winner of interprofessional practice is the patient.

Is it possible to educate students to be interprofessionally competent, filling the gap between ability and capacity? As this issue is complex, I would like to point out the importance of having tools that can be used by all professions in order to facilitate the work of the team. By using common tools, communication and collaboration between team members should be facilitated (Wilhelmsson et al., 2012).

I conclude by summarising with a metaphor that illustrates the differences between traditional education and IPE and foregrounds the benefits of IPE. When a theatre director is setting up a production, what happens if he or she decides to let the actors rehearse their roles separately and then meet one another for the first time on stage on opening night? Unfortunately, in Sweden, as in many other countries, students who are going to work together in health and social care organisations have not, for the most part, "met" one another during their education/training "rehearsals," even though they are going to act every day in the same arena with the same patients and clients. Thus, rather than having accumulated interest or gains, they, and more importantly their patients, are disadvantaged by the lack of opportunities to be educated collaboratively, interprofessionally.

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14. PHYSIOTHERAPY CLINICAL PLACEMENTS AND LEARNING TO REASON

Learning to reason should be experienced within a continuum of professional development, guided by curricula explicitly focused on the learning of and from clinical reasoning. We contend that this learning should be initiated during professional entry education, and intentionally built upon through post-entry-level continuing professional clinical education opportunities. While the focus and examples provided in this case are primarily from the authors' entry-level education teaching and curriculum development experiences, we also extend our discussion to consideration of how learning to reason should and can be further facilitated within post-professional entry education contexts such as residency and fellowship programs.

THE SETTING

Professional Entry-Level Physiotherapy Education in the United States

Professional entry education programs in the United States (U.S.) are currently graduate level programs. Clinical education is coordinated by each academic program, and takes place in various clinical settings in the larger health care community, most often independent from the academic/university system.

The Learners

The learners enter the academic program with various levels of preparation. For example, some students have prior experience working in the field as technicians prior to attending the academic program, and therefore may be perceived as having an experiential knowledge advantage in the clinical education environment. However, the playing field is levelled in terms of performance expectations upon completion of their first integrated clinical experience. At this point all students achieve the same minimum performance level on the Clinical Performance Instrument (CPI) (American Physical Therapy Association, 2006), the standardised assessment tool used in the U.S. by clinical instructors.

The Teachers – Academic and Clinical Faculty

Students have many teachers in the academic and clinical setting. Academic faculty for more clinically-focused courses provide the primary education

preparing students for their clinical education experiences. Clinical education coordinators, housed in the academic setting, provide preparation and follow-up (in collaboration with academic faculty) not only for academic requirements but for clinical education experiences (courses) as well. As a whole, the clinicians responsible for providing education in clinical (practice) settings, referred to here as clinical instructors (CIs), are characterised by significant variation. They include licensed physical therapists, credentialed CIs (basic and advanced levels), board-certified clinical specialists, managers, and other health care professionals.

The CIs may have various levels of knowledge of clinical reasoning, especially current clinical reasoning theory and research, and often little knowledge of teaching clinical reasoning. This results in CIs who commonly have a less comprehensive understanding of the process of clinical reasoning than is evident in more contemporary literature. Moreover, CIs have various academic professional entry degrees (e.g., BS, MPT, DPT) and various educational backgrounds, with different levels of postgraduate education. Generally, most programs require that their CIs are licensed physical therapists. Although American Physical Therapy Association (APTA) Guidelines for Clinical Instructors (American Physical Therapy Association, 2004) suggest that CIs have at least one year of experience, there is not a further requirement that they are trained in any way as clinical instructors.

THE FOCUS

In this chapter we illustrate specific teaching and learning strategies employed in professional education that support our vision of what can be and what we contend should be the journey of learning clinical reasoning across a professional trajectory, available to all physiotherapists. Although the concrete examples of curricular strategies designed and implemented for the learning of clinical reasoning provided here are from the experiences of one author (Christensen) at Samuel Merritt University's Doctor of Physical Therapy program and within the Kaiser Permanente Los Angeles Orthopaedic Physical Therapy Residency and Fellowship programs (both in California, U.S.), our intent is to illustrate the types of change that can and should be implemented routinely and broadly in all educational settings throughout the professional educational continuum.

Our understanding of students' experiences of learning to reason during clinical education has been informed by research by Christensen and colleagues (Christensen, Jones, Edwards, & Higgs, 2008; Christensen, Jones, Higgs, & Edwards, 2008). The learning of clinical reasoning experienced by their student participants was more often implicit than explicit, and was inconsistent and variable. Opportunities to develop capability in their practice by working with and receiving feedback from clinical instructors skilled in clinical reasoning and its facilitation (in students) were not considered a guaranteed part of their educational process, but rather viewed as the result of chance assignment to particular CIs, or "luck of the draw." This largely implicit (and at times absent) clinical reasoning curriculum was also experienced in the academic classroom setting. Each

educational setting in isolation was interpreted as lacking in explicit teaching and learning for development of clinical reasoning skills, and the learning in each setting was disconnected from the other.

The educational implications of these findings, in combination with our collective observations and experiences as educators, reinforce our assertion that there is an obvious need to be intentional about bridging the gap between educators in each setting, in order to facilitate and guarantee opportunities for students' learning and development as clinical reasoners. Next, we present strategies for this type of bridging between educators in the academic and clinical education settings, in order to better facilitate students' overall learning of clinical reasoning.

THE STRATEGY

Making the Invisible Visible through Models and a Common Language

Clinical reasoning can be interpreted as an invisible, complex, abstract practice phenomenon that must made "visible" for educators and students to make it an explicit focus of discussion, learning, assessment, and feedback. It has been well argued in the literature (Christensen et al., 2008b; Christensen & Nordstrom, 2012) that explicit learning of research-derived definitions and models of clinical reasoning can serve to allow educators to make explicit ways they can see, learn about, and learn from their clinical reasoning. The learning of clinical reasoning models therefore can "create points of focus around which the negotiation of meaning becomes organized" (Wenger, 1998, p. 58).

An example of a model that one of us (Christensen) has used in this way is the clinical reasoning strategies model that Edwards, Jones, Carr, Braunack-Mayer, and Jensen (2004) derived from their research describing the clinical reasoning of expert physiotherapists. A brief summary of the clinical reasoning strategies is provided below in Table 14.1. This model represents a way of depicting and making explicit the different types and broad scope of reasoning activities associated with clinical practice. This model has been successfully integrated as a foundational conceptual model or curricular theme by Christensen in both her professional entry-level teaching, and in post-professional curricula, including a transitional Doctor of Physical Therapy program, an Orthopaedic Physical Therapy Residency program, and several Physical Therapy Fellowship programs (e.g., manual therapy, sports physical therapy, hand therapy, and movement science).

In this educational bridging strategy, students are educated about the model, and encouraged to adopt the language of the model to describe aspects of and performance in each of the clinical reasoning strategies. Students use the model as a framework within which to observe, describe, and critically reflect on their own reasoning and that of others in simulated and real practice experiences. The model of clinical reasoning chosen in this example portrays the many forms of reasoning characteristic of expert clinical practice (Edwards et al., 2004; Jensen, Gwyer, Shepard, & Hack, 2000) and explicitly includes both traditionally emphasised hypothetico-deductive forms of reasoning (aimed at identification of cause and

effect relationships) and more recently recognised narratively oriented forms of reasoning (aimed at understanding patients' perspectives), and the ways in which each of the reasoning strategies influences and is influenced by the others. In this way, adequate attention is drawn to the complexity of reasoning occurring about both the "patient" and the "person" involved (Jones & Rivett, 2004), thereby making explicit and reinforcing a patient-centred, biopsychosocial approach to clinical reasoning in health care.

Table 14.1. Clinical reasoning strategies model (Edwards et al., 2004)

Reasoning Strategy	Description
Diagnostic reasoning	Cycle of hypothesis generation, testing, and subsequent modification of hypotheses occurring in order to evaluate the patient (i.e., diagnose the problem)
Narrative reasoning	Achievement of an understanding of the patient's perspective of his/her story (includes beliefs, motivations, emotions)
Procedural reasoning	Reasoning related to choice and administration of intervention procedures
Interactive reasoning	Reasoning related to choices therapists make of how to interact or establish rapport
Collaborative reasoning	Reasoning related to nurturing a consensual approach with patients, wherein mutually agreed-upon decisions about goals and management strategies are achieved
Teaching as reasoning	Reasoning related to approaches and strategies for educating patients and assessing learning
Predictive reasoning	Reasoning leading to development of a prognosis
Ethical reasoning	Reasoning employed in perception and resolution of ethical dilemmas

Once a model such as the clinical reasoning strategies model has been introduced and adopted as a framework within which faculty and students can identify aspects of clinical reasoning, label them, communicate them, and critique them, the teaching, learning and assessment of technical skills such as manual therapy and therapeutic exercise are then explicitly embedded or situated within the context of the appropriate clinical reasoning strategies involved. This allows the explicit construction of links between students' knowledge of "doing" physiotherapy and the thinking and experiential learning processes within which that doing takes place.

For example, when teaching about various interventions for patients with motor control impairments in the shoulder girdle, educators (in academic and clinical settings) can embed the discussion within a larger framework of relevant clinical

reasoning strategies, such as procedural reasoning and predictive reasoning. Often this discussion can be easily extended to include a more integrative consideration of the narrative reasoning and exploration of the aspects of interactive reasoning, teaching as reasoning, and collaborative reasoning required in order to work to improve motor control while in the clinic and when developing appropriate home exercise programs with patients, taking into account appropriate individual contextual factors.

Ideally, if this type of educational strategy were commonly implemented at the professional entry level, subsequent learning experiences in post-professional education contexts could pick up from where students' learning left off in their entry-level training, and progress further along a development continuum when working in residency and fellowship mentoring situations. Students with more real-life experience to draw from should be able to engage at a higher level of complexity in discussing and exploring their use of and skill in each of the clinical reasoning strategies, reasoning errors, and maximisation of the experiential learning that can result from their reasoning experiences. As it is beyond the scope of this chapter to provide in-depth discussion of the clinical reasoning strategies model, for more detailed examples of how it has been interpreted and applied as a teaching tool the reader is referred to Christensen, Jones, and Edwards (2011) and Christensen and Nordstrom (2012).

Simulated Clinical Experiences and Assessment of Clinical Reasoning

Another example of implementation of an explicit curricular focus on and assessment of clinical reasoning is through the use of standardised patient simulated clinical encounters with students in the professional entry-level academic education setting. These experiences can be considered "bridging" in that their intent is to provide simulated clinical practice in a controlled and graded manner; therefore, the intent is to gradually increase the level of complexity and challenge inherent in a scripted standardised patient encounter as students move through the curriculum.

The explicit focus on performance and reflective critical self-assessment, and on assessment and specific feedback from course instructors on both the level of students' performance and students' self-assessment, is embedded in assessment schema developed for the post-performance reflection and assessment. The assessment schema is built upon the same clinical reasoning strategies model introduced and threaded throughout the curriculum as a foundational construct. In this way, students and faculty are continually prompted to engage in assessment and discussion of performance of clinical reasoning strategies, with assessment on performance in areas such as technical skills, handling and communication situated within a larger clinical reasoning assessment framework. This includes an in-depth analysis of the coherence and appropriateness of reasoning and subsequent decision making within each of the clinical reasoning strategies categories.

The final aspect of the bridging experience is the collaborative setting of goals by students with their faculty for their upcoming clinical education placements.

This element is critical to make explicit the continuum of learning between the clinical education setting and students' performance on simulated clinical experiences in the academic setting. To facilitate the bridging of clinical reasoning assessment between the academic setting and the clinical education setting, academic programs can provide rubrics to their clinical instructors that have been used with the students to assess simulated clinical encounters in the academic setting. In this way, clinical instructors can integrate their assessment of students' clinical reasoning performance within a similar framework, and students can more easily compare their performances between settings and over time as they progress in the curriculum. Currently there is no systematic means of coordinating the assessment of clinical reasoning done in the academic setting with the CPI.

CHALLENGES FACED

Perhaps most critical to the success of creating visibility and a coordinated, explicit focus on teaching and facilitating the learning of clinical reasoning in both settings (academic and clinical education) is whether all faculty involved, in both settings, are committed to the development of a common understanding of the same clinical reasoning model, definitions and language, enabling them to demonstrate, observe and label aspects of reasoning, to discuss, assess and provide specific, focused feedback on clinical reasoning development with students. This teaching/learning process must be intentional and involves a commitment of time and energy on the part of all faculty involved to develop and participate in focused faculty development programs, designed to facilitate learning of both academic and clinical faculty.

Ideally, all clinical instructors would be required to have achieved basic clinical instructor credentialing through the currently available training course developed and sponsored by the APTA. Widespread training such as this would assist in giving CIs the support necessary to be successful as providers of clinical education, and prepare them to adequately assess the clinical performance of students, including their clinical reasoning. Some academic programs have recently offered incentives such as continuing education units (CEUs) to physical therapists who work with their students. The criteria for awarding CEUs suggest that the therapist should be a credentialed physical therapist (or physical therapist assistant) and provide student supervision for a certain number of hours. Should this become more uniformly implemented, it may facilitate training and learning for CIs. Integration of a standard model and language of clinical reasoning into a nationally-administered training program could also promote the development of greater consistency in the quality and skill with which CIs facilitate the learning of and from clinical reasoning in clinical education settings.

CRITICAL REFLECTIONS

When it comes to facilitating the development of clinical reasoning abilities in our students we need to remember that this ability needs development across one's

professional career. Do we think about the benchmarks for the development of clinical reasoning and decision-making skills from entry into practice to advanced practice? When one asks therapists what draws them into clinical residency programs they often express frustration about entry-level training and short continuing education courses that focus more on technical skills, and express a desire for development of stronger reasoning and decision-making abilities.

We argue that at the broadest level, we need to fully understand the core work of the physical therapist and then craft our teaching and learning strategies for developing clinical reasoning from that perspective. The assumption of a narrow focus that limits consideration of clinical reasoning as "only the skill that leads to a diagnosis" is a translation from medicine that we know does not necessarily hold for the work of physical therapists. If we believe that the work of physical therapists focuses on human improvement that relies on the therapist's ability to interact with patients/clients in the process of improving skills, coping with feelings, and facilitating behaviour change, then therapists cannot succeed without working together toward that success or outcome (Jensen, 2011).

As a profession, we are also challenged by thinking that is too often focused on the analytical – the dominant pattern – where thinking, things, and events are somewhat detached from everyday life as we look only for general patterns of cause and effect. We know that understanding the context and lived experience of the patient ("reading" the patient) is critical in designing successful physical therapy interventions. This understanding of context relies not only on analytical skills but also on the development of the narrative, where significance is found in understanding the context of meaningful interaction (Bruner, 1990). Therapists tend to think about and remember the stories of their patients, because those stories allow them to represent the unfolding of the case with meaning – making sense of the patient's signs and symptoms – together with analytical knowledge. Clinical knowledge, then, is developed from this ability to understand and interpret the context, together with analytical skills, in the uncertain conditions of practice (Montgomery, 2006). The continuing ability to build new clinical knowledge and develop deeper understandings of practice needs to be intentional and lifelong.

As well as our own efforts, some described in this chapter, there are currently many other efforts at the local level (e.g., within one educational program or one clinical education setting) aimed at raising the visibility of explicit learning of clinical reasoning in professional entry-level and post-professional clinical education programs. There are also some efforts under way at the national association level geared toward elevation of the training of CIs (described previously), but we contend that these efforts are not yet sufficient to achieve consistency in the level of clinical instructors' skill development specific to facilitation of the learning of and from clinical reasoning in the clinical education setting. For real, widespread change to occur, we contend that a focus on teaching and learning of clinical reasoning must become more of a priority in funding and research at the national level. Lasting change will require a broad view, encompassing development of understanding and skills at the individual, academic

institutional, clinical community, state and national association levels of our profession.

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15. ASSESSMENT FOR LEARNING

THE SETTING

Most students enter medical school with the intent to become a physician and work in patient care; and rightfully so because good patient care is important for society. But there is also a need in society for physicians or MDs with special abilities in conducting biomedical and clinical research. This special need was the reason why at the University of Maastricht a graduate-entry medical program was begun with an annual intake of 30 students. But it was not the only reason. Educational innovation and experimentation have become increasingly difficult due to the rapidly increasing enrolment in many medical programs. Our new program was therefore also started with the intent of enabling experimentation and innovation at the curriculum level.

The curriculum of this program (called AK-O which is the Dutch abbreviation for Physician-Clinical Investigator) is new in that it is eclectic in its educational philosophy. This implies that it does not see any educational approach as inherently superior. Instead, it seeks to build a medical education program of which the building blocks are based on what is known to work best from the literature on education, learning and development of expertise. This may not be entirely new, as there are probably many other educational programs that are optimised in this way. What is quite unique though is its radical approach to assessment. Instead of adopting a traditional view of assessment, where assessment is used mainly to determine whether students can make the cut or not and to motivate students for learning, assessment is used in the AK-O as an integral element of the learning process. This may seem obvious and not entirely new – many programs have some sort of formative assessment – but we argue here that this is radically different from the traditional approaches. Moreover, we think it is a successful example of turning an assessment culture around from a test-driven to an evaluation/improvement-driven one.

THE FOCUS

Though the radical implementation may be quite unique, the notion of this type of assessment is not. In the literature it is often called assessment for learning, as opposed to assessment of learning (Shepard, 2009). In assessment for learning the focus of the assessment is on using all possible information in an optimal way to steer, foster and motivate students at the individual level in their learning

processes. Assessment for learning, therefore, incorporates several fundamental principles. The first principle concerns the purpose of the assessment. The central purpose of assessment of learning is to determine almost exclusively whether student A is better than student B or if they are better than a cut-off score (for a virtual borderline student). Assessment for learning seeks to answer the question whether both students A and B are today optimally better or more competent than they were yesterday, and whether they will be optimally better tomorrow than they were today, in order in our case to stimulate every student to become the best doctor s/he can be. For this, assessment has to give directions as to what educational intervention would be best for each particular student to become optimally better tomorrow. And finally, such assessment is fully useful if it determines also whether students are sufficiently on track to becoming competent professionals. In summary, this "assessment for learning" program, in analogy to patient care, seeks to answer three questions:

1. Do we have enough information about the progress of this student or is additional assessment necessary (the "diagnostic" question: is the diagnostic work-up on this student complete)?
2. Which educational intervention is most useful for this student at this time (the "therapeutic" question: which therapeutic educational intervention is most indicated)?
3. Is this student on the right track to becoming a competent professional (the "prognostic" question: what is the prognosis for this student at this moment)?

In the design of the assessment program three major issues became clear right from the start. The first was that in such an assessment approach no single instrument can be seen as a panacea; no single instrument can do it all. Therefore a program of assessment is needed (Van der Vleuten & Schuwirth, 2005). This might not seem novel, but in fact it is. Our literature has been and still is full of papers trying to demonstrate the superiority of one assessment method over others, whereas from a programmatic view the question "where would the instrument fit best in an assessment program?" is much more relevant. In programmatic views on assessment there are no good or bad instruments per se; each has its indications, side-effects and contra-indications, and should be fitted into the program where it serves its best purpose. Programmatic assessment also requires considerations at the level of combining the results of different instruments, beyond the often arbitrary decisions (examination A counts for 80% and examination B counts for 20%) made in many assessment programs, in which no clear consideration is given to how those examinations contribute to the overarching goal of the assessment program.

A second issue was that for assessment to really inform at the level of integrated competencies, a 1:1 relationship would not work. By a 1:1 relationship we mean an assessment program in which for each competency there is one assessment method and each assessment method is used for only one competency; for example, a critically appraised topic for the role of scholar, a multiple-choice examination for the role of medical expert, and a presentation for the role of health advocate, etc. In

truly programmatic assessment the results of several assessments can be used to inform each competency domain and each assessment can inform several competencies. Suppose a student performed poorly on an objective structured clinical examination (OSCE) station on communication with a patient with abdominal complaints. These results could be used to judge the student's communication ability, understanding of pathophysiology, or preventive counselling skills (roles as communicator, medical expert and/or health advocate). In reverse, the results of various tests can be used to inform about a student's progress as scholar. In its extreme form this would imply breaking up assessments into parts, each of which can inform a different competency. This is not as strange as it might seem. There is good evidence in the literature that the content of the assessment determines much more what the assessment assesses than the format. An OSCE station on abdominal examination, for example, correlates better with a set of multiple-choice items on abdominal anatomy than with a station on neurological examination (Norman, Tugwell, Feightner, Muzzin, & Jacoby, 1985). Yet we still add up abdominal examination results with neurological examination results because they are of the same format, and we add up abdominal anatomy questions with neurology questions for the same reason. In patient care this would be similar to compensating for a low sodium level with a high blood glucose level and claiming that this patient is healthy because the average of his/her sodium level and blood glucose is above an arbitrarily set standard.

A final issue was that the assessment must be meaningful and taken seriously, but must also be fair and rigorous. This is not easy to achieve; many of the notions about rigour and fairness of assessment originate from research into assessment of learning, and so new ideas had to be found.

THE STRATEGY

Central to the assessment program of the AK-O is the portfolio; it is the backbone of the program and actually all study credits are assigned to it. All other assessments serve to produce information for the portfolio. Our portfolio is therefore not an instrument to assess reflection (that would be a 1:1 again), but it is used as analogous to a patient chart in patient care. The strength-weakness analyses (or the reflective analyses) with their learning goals are like the doctor's notes.

During each educational module, whether it is more theoretically oriented or more practical in nature, many assessment moments are built in, the results of which are all incorporated into the portfolio, need to be addressed in the strength-weakness analyses, and lead to concrete learning goals. The assessment program has longitudinal elements as well, including progress testing, continuous assessment of professional behaviour and a series of cumulative assessments concerning the topic of patient-doctor and society. The results of these assessments are of course part of the portfolio as well, as is all the informal feedback and evaluation a student receives.

Several times per year each student meets with a specifically assigned mentor to discuss progress. The student updates the strengths-weaknesses analysis and

reflects back on the completion of previous learning goals. The student and the mentor then discuss the updated portfolio addressing the three questions (diagnostic, therapeutic and prognostic). At the end of the year the mentor provides written advice about whether the student should be allowed into the next phase of the study or not, which is reviewed in a committee meeting of independent mentors in the presence of the student's mentor – with only an advisory role – after which a decision is reached.

This may seem a vulnerable process, but numerous measures have been put in place to make it rigorous. The portfolio needs to contain full information of all formal and informal assessments. To this end, the mentor has a list of all assessment moments and types of information to expect, so s/he can check at any time (and does so) whether the dossier in the portfolio is complete or whether the student has strategically omitted information. The portfolio is therefore not "student-owned," but is a shared document between student and faculty.

Minutes of each meeting are taken down on paper and these minutes have to be approved by both the student and the mentor as an accurate record of what has been discussed and agreed. These are a required element of the portfolio content.

Once each year, a second, independent mentor sits in on the meeting to provide a fresh pair of eyes on the process. At the end of each meeting the mentor provides in writing a prognosis about the student. Any negative decision at the end of the year, therefore, cannot come as a surprise to the student. The mentor is extensively trained for the role. In the training sessions, special care is taken to avoid common pitfalls such as the halo effect, primacy effects, cognitive dissonance, investment traps, etc. That is an extra reason why note-taking of the whole process is considered so important: it not only makes the process fully transparent and accountable but also counteracts some of the biases.

The mentor's advice is exactly what it says: advice. The decision is made by a committee of independent mentors. The procedure is as follows: one of the independent mentors reads the whole portfolio, prepares a summary of the most important information and prepares a decision. This is then presented to the group of mentors, who critically appraise this information (often consulting the portfolio specifically). When needed, the student's mentor may add his/her view or extra information. This whole procedure not only ensures greater "objectivity" in decision making; it also serves as an extra learning experience for all mentors.

This learning experience is on top of frequent peer-feedback mentor meetings. During these, mentors discuss difficult cases or situations – anonymously – and seek advice from their peers. They share strategies, pitfalls (e.g. judgement biases) and other experiences. Thus, ongoing improvement in expertise occurs.

All formal assessment moments may be highly informative but they are not completely formative nor are they completely without stakes, because they all serve to contribute to a summative decision at the end. The main difference is that an assessment moment is not automatically a decision moment; quite the contrary, most of them are not. Of course, all assessment is subject to regular quality control procedures such as item review processes and item analyses.

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THE CHALLENGES FACED

This not to say that implementing this program has been easy – quite the contrary. The central idea may be intuitive but with the implementation all kinds of implications and consequences arose.

A first issue we had to deal with was the legal framework. Educational laws in the Netherlands prescribe a strong relationship between an educational module, its assessment and study credit points. Such laws are typically designed to cater for an assessment of learning approach and not assessment for learning. In planning the whole program we had considerable problems convincing the legal department of the university of the legality of it all. Actually, we were told "no" repeatedly until we managed to convince the Vice-Chancellor – who is a professor at law – of the program and he decided that it was in our university's remit to innovate and that this involves seeking the boundaries of the law. Once his consent was obtained we could go ahead and implement the program in full. In short, the permission enabled us to assign all study credit points to the portfolio and to give to students at the end of a phase and not during a phase. So far we have had no legal challenge, probably because of the transparency, carefulness and credibility of the program.

More difficult was changing the culture. The students who enrolled in our program were clearly all high achievers. They had completed a previous biomedical bachelor degree and had all obtained high grades. So they were used to succeeding in an assessment of learning environment and they were now asked to adapt to an assessment for learning environment. Because the former rewards performance orientation and the latter rewards a learning orientation this was not easy for most of them. Many struggled with this and just wanted grades (high grades, that is to say). And although feedback on all formal assessment included information with respect not only to what their strengths and weakness were but also to how well they had done overall, they still had considerable problems getting used to this assessment culture. On the rebound, once they had adopted the new culture it drove them into an extreme learning-orientated mode and they experienced problems deciding when enough was enough. Fortunately the mentors were able to help them with this. In their regular meetings with students mentors had the opportunity to help them better understand the culture and to slow students down if burnout threatened. Furthermore, regular class meetings were organised to explain and discuss the curriculum and the assessment with students. Finally, after the program had been running for some years the informal information-sharing between more senior and more junior students proved a useful means of acclimatising junior students to the new culture.

Not only students had to become accustomed to the new assessment culture; teachers had their problems too. Their most typical concern in this highly integrated approach to education and assessment was that their subject would not be covered with sufficient detail. It was therefore important to help them design assessments that would require integration of the essentials of their own topics with those of related disciplines; to produce genuinely integrated assessments rather than a stack of individual topic examinations. For this, it was necessary for teachers

to convene in groups and jointly produce assessment cases. Typically, such cases could only be solved and the related questions could only be answered correctly if the relevant knowledge of several topics and disciplines was combined successfully. We think it is obvious that this was not an easy task, but as experience grew it became easier, and we were able to tease out some templates and good examples to help in subsequent item-writing sessions.

Another aspect to which teachers needed to become accustomed was the provision of feedback. Most teachers were not really well experienced in this, and made only general comments such as "well done." Or they provided unworkable suggestions, such as "try to be a bit more assertive." So teacher training was focused on providing concrete feedback (what was good and why and what was bad and why?) and on behaviour rather than personality traits (if you are not assertive and this leads to you being given tasks you don't actually want, why not try out different strategies for saying "no").

By now you may have thought about the enormous costs associated with such an assessment program, and that seems to be one of its challenges. But actually the most challenging task is to show that the benefits outweigh the costs. The mentoring system seems costly, for example, but it also saves money. First year students see their mentor six times per year for half an hour. The mentor needs preparation time which is budgeted at an hour per meeting. For a starting mentor this is perhaps insufficient but as the mentoring experience grows the time needed to read and understand a portfolio decreases considerably. Also, mentors get to know their individual students and acquire good knowledge of what was in their portfolio; therefore they need considerably less than an hour. In all, mentoring requires the equivalent of 9 hours per student per year, so for 30 students this equals 270 hours or .16 FTE, costing roughly 20,000–25,000 Euros per year. If mentoring can prevent only one student from leaving the course or being delayed by a year, breakeven is already achieved. Unfortunately it is difficult to demonstrate that the mentoring system does prevent such attrition, and therein lies the challenge.

CRITICAL REFLECTIONS

Thus far everybody is enthusiastic about the program, and unfavourable reactions concern more minor implementation-related and organisational issues than the overarching concept of assessment for learning. But there is certainly no room for complacency, as much of what we do is experience-based and lacks rigorous scientific underpinning. At Maastricht University educational research is considered important, and especially the combination of fundamental and applied research is seen as essential to the support of any educational action.

Therefore this has set the research agenda in the following directions:

The AK-O program has adopted a programmatic approach to assessment and therefore it is important to understand better what determines quality of assessment at the level of a program. There is a shared opinion that the combination of reliability, validity, educational impact, cost-efficiency and acceptability are

elements of the quality of individual instruments (Van der Vleuten, 1996), but little is known about quality of programs. Therefore, a PhD project has begun on this topic, which has led to the development and early validation of a model for quality of assessment programs (Dijkstra, Van der Vleuten, & Schuwirth, 2010).

An old mantra in assessment is that summative and formative functions should not be mixed. In assessment for learning, however, these two functions have to be mixed, and a separation between assessment moments and decision moments is considered more useful. This puts extra pressure on teachers, because they have to combine formative and summative roles continuously. Thus we need to understand better what enables teachers to combine those two roles and – more importantly – which elements would constitute barriers to this combination. Research into the mental processes of teachers/assessors, how the summative and formative combination influences their feedback, and which organisational elements hamper this process has started and is part of another PhD project.

In combining information from various parts of assessment, both quantitative and qualitative, into meaningful conclusions about progress in competency domains, human judgement is indispensable. This might seem a difficult judgement task, but it is something humans do on a regular basis. Most doctors, for example, can easily combine complaints of thirst, poorly-healing wounds and fatigue with physical diagnostic findings of peripheral small artery dysfunction and a glucose level of 35 mmols/l into a possible diabetes mellitus, combining acoustic, visual, tactile and numerical information. The main reason they are able to do so is their extensive training and expertise development and their good understanding of the context as in illness and instance scripts. This leads them not only to understand the importance of each of the contributing features but also to be less susceptible to bias in evaluating the information. That is why we have started research into the nature of assessor expertise and the extent to which it is comparable to diagnostic expertise (Govaerts, 2011).

Another important implication is that standard psychometric methods cannot be applied to all decisions made during the assessment. Most standard approaches make firm assumptions about the nature of the aspect being assessed. Reproducibility, for example, assumes that the object of measurement is stable during the measurements. But what if repeated measurements (as in mini-CEX assessment) take place over a longer period of time and if considerable learning or development takes place between the observations? The student has then changed, and consequently scores on subsequent measurements will differ. Under the assumption that the object of measurement does not change these differences would be seen as error, whereas at least part of the change would have to be attributed to development and learning. Qualitative comments, feedback, and holistic decisions are all-important elements in a program of assessment but they do not fit well in a standard psychometric framework. Yet their quality needs to be demonstrated. Research has therefore been started to explore various methods of demonstrating assessment quality and to understand better which method is best for which element of the program. This is in its initial phase and needs further development.

FINALLY

We have presented a case of implementation of an assessment for learning program in one institute. A similar program has been established elsewhere (Dannefer & Henson, 2007). We have used this example for two reasons. First, we wanted to show a real implementation of what in the literature is often largely a merely philosophical notion, and to show that it can be done in a normal educational (though certainly not a worst-case) situation. Second, and more important, we wanted to show that just putting a good idea into practice does not suffice. One must realise the accompanying practical implications. Also one must understand that new ideas bring new questions, and that medical education development can only be taken seriously if it is supported by a critical research program.

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ELIZABETH MOSTROM AND LISA BLACK

16. THE TALE OF TWO PROMISING NOVICES

Lana and Jean

Several years ago, seven colleagues from the United States interested in the early professional development of novice physical therapists undertook a qualitative study to explore this under-investigated area of therapist learning and growth. We were building upon the work of Jensen and colleagues (1999, 2007) who had completed a landmark study of expertise in physical therapy practice in the U.S. Their work raised this intriguing question: What factors, internal or external, led some therapists toward growth into mastery yet not others? We decided to begin our search for answers by studying promising novice therapists during their first 3 years of practice. More details on the study design, methods and findings have been reported elsewhere (Black et al., 2010; Mostrom et al., 2011). Data collected during the investigation included reflective journal entries, frequent semi-structured interviews, and a field observation. Portions of the data provide the source for the stories we share in this chapter. Here we tell a brief tale of two of these promising novices, Lana and Jean (pseudonyms), drawing primarily on their own words, as they travelled different paths during their early careers. We conclude the chapter with some reflections on their journeys and consider both the divergence and convergence of their paths. Finally, we consider how their stories might inform our understanding of novice learning and development "in situ" – of learning in and through practice in the early careers of physical therapists.

THE STORY OF LANA

Lana graduated from a physical therapist educational program in the U.S. with a Master's degree in physical therapy as well as a Doctorate of Physical Therapy. Like many other programs in the U.S. at the time, her program was in transition from awarding a MS degree as the first professional degree to the DPT degree. Students in Lana's graduating class could elect to complete additional courses and credits to receive the DPT degree. Not surprisingly, Lana elected this option.

Lana, like Jean, was invited to participate in a study of promising novice clinicians in their early careers because she met several criteria: she had demonstrated many characteristics and attributes associated with professionalism throughout her time in the program, including a high degree of engagement in professional or service activities; she had a grade point average above 3.0 (4.0 scale); and she had excelled in her final year clinical internships. For Lana, one of

those internships was a paediatric rotation and there she found her clinical "love" and "niche." As a result, to start her physical therapy career she decided to seek employment in a setting where she could work with children.

The Setting

Lana's first position was at a regional children's centre affiliated with an urban hospital and health system. Inpatient and outpatient rehabilitation services were provided by a team of physical therapists, occupational therapists and speech-language pathologists who worked in collaboration with physicians, nurses, prosthetists, orthotists, psychologists, respiratory therapists, and social workers, among others. Lana was one of seven physical therapists on the paediatric rehabilitation staff and she worked with both inpatients and outpatients. She spent the first 3 years of her professional career here, leaving at the end because of family circumstances that required a move to a different region.

The Focus

The focus of the study we undertook was to systematically, qualitatively and longitudinally investigate the early learning and professional development of promising novice therapists. The questions we sought to answer were many:

> What are the sources and nature of learning for new professionals during their early years of practice? What forces or factors influence the nature and trajectory of professional development during this time? What facilitates and constrains learning? What experiences shape the formation of professional identity for novice clinicians? How do novices change over time? Why do some therapists grow toward expertise and not others? (Black et al., 2010, p. 1761)

The Strategy

Through reflective journals, interviews and observations we had multiple opportunities to read the words, hear the voices, and observe the actions of our participants as we became companions in their professional and personal journey during their first 3 years of practice as a physical therapist. We turn now to a brief glimpse of Lana's journey.

Year One Lana's first year of practice was one of significant learning and growth, largely supported by a network of mentors and colleagues who welcomed her and quickly saw her as a valued member of the rehabilitation team. In turn, she gained confidence in her abilities and potential to contribute to the team and the lives of her patients. Lana selected her first job because she wanted and hoped for the type of mentorship that she came to experience there. The mentorship available at the centre was both formal and informal.

> They offer a mentorship program where you are teamed up with another therapist to essentially show you the ropes and to meet with you on a weekly

basis to assist you with any questions or concerns. I found this to be an asset as I had many questions about paperwork, routines, and clinical questions. I also found that [the] team of PTs, OTs, and speech therapists all work closely together and a close team environment is really where I find myself fitting well.

Over the year, weekly meetings with Lana's assigned mentor were gradually discontinued as a rich network of informal mentoring among therapists and across disciplines replaced the structured program. In Lana's words we also hear how this network of supports and community contributed to her growing confidence and early identity as a "real" therapist and contributing member of the team.

Now that I am becoming more a part of the team, I find senior therapists coming to me with questions. It's nice to know that I can offer ideas or suggestions even though I may not always have the most experience. I feel that my opinion is valued just as much as everyone else, and that's a rewarding feeling.

The children and families Lana worked with on a daily basis were another primary source of learning during her first year of practice. When reflecting on her learning through engagement with her patients, she often focused on lessons learned through some of her most challenging cases. Among these was an 8-year-old with a history of stroke who had recently undergone a craniotomy for brain cancer. The child was one of several children in a refugee family that did not speak English and had difficulty getting to therapy due to language and transportation barriers. As Lana worked with the child and family through an interpreter, she learned that the child was not yet enrolled in school even though the family had been in the country for more than 6 months. Therefore she not only tried to improve the child's strength and function, but also made numerous contacts with physicians, social workers, refugee services, and the school, to advocate for the child and family.

This is just one of many stories of challenging cases that Lana shared as she progressed through her first year of practice. The common thread was that she was constantly learning through her experiences with her patients, and each of them was shaping who she was as a therapist and as a person.

Year Two As Lana moved through her second year of practice, she continued her learning through interaction with patients, family members and professional colleagues. She found rewards in many aspects of her work, including praise and recognition from her patients and their parents, physicians, and her department manager. All of these forms of feedback contributed to confidence in her ability as a therapist and the desire to expand her knowledge and skills even more. Lana described two of the most meaningful of these experiences this way:

I recently received this letter from a 13-year-old patient: "Dear Lana, Thank you so much for being my physical therapist. I definitely could not have gotten to the point that I'm at without you. Although it's been tough, I've had fun doing it and I want to say thank you so much."

A second compliment came from a paediatrician who called Lana to thank her for her work with a young girl she was seeing who had lived the first 9 months of her life in an orphanage in China and had significant developmental delays.

> The paediatrician called me to personally thank me for doing such a great job with her and she said she was glad that we had therapists of my calibre!

During Lana's second year at the centre, one of us (EM) had the opportunity to complete a field observation of her working in the clinic. On that day, Lana worked with children ranging in age from 3 months to 11 years, with diagnoses that ranged from various forms of cerebral palsy and developmental delay, to vanishing white matter disease, to closed head injury. What was most remarkable about the day was that even though Lana was busy and in perpetual motion, the activities and transitions within therapy sessions and between therapy sessions were fluid yet flexible, according to the needs and responses of the children or their parents. As a result, there was a sense of calm to the sessions in spite of all the activity they entailed. When asked about this, Lana said she tried to follow the child's lead to keep them and the parents engaged:

> You can tell when a kid needs a break or when they're tired or when they are just not interested in the activity and they've played with that toy for too long and they want a different toy. You can just sense it …

> In the same interview, Lana commented that the skills she felt most critical to her success with children and their families were her communication skills and "just that involvement, that personal involvement."

A formative event toward the end of Lana's second year of practice was her first opportunity to serve as a clinical instructor and supervisor for a physical therapist student. Although she admitted to being nervous and "unsure" about having a student and questioned what she might have to offer, she found that this experience helped her learn and grow even more as a therapist and person.

> I never realised how much knowledge and experience I had to share with this student until I began to mentor her and answer her questions. Watching her form some special bonds with her patients was also rewarding and knowing that I played a role in her professional development. I was also sad to have my student go, as I felt that she taught me many things as well.

Year Three The third year of Lana's time in the paediatric rehabilitation unit was marked by administrative and structural change at the rehabilitation unit, involving reorganisation of the paediatric staff into inpatient and outpatient teams. Not surprisingly, as with most change, there was some stress and dissatisfaction among team members associated with the change, including Lana. In response, the department scheduled a multi-day conference to assist participants in the transition, with an aim of empowering them to be part of the process in a positive and transformative way. Lana said the course emphasised the importance of working together to make each individual and the team work better:

> I took a lot of this to heart and felt empowered to start making changes ….
> After attending the conference, I decided to propose blocking a specified time
> in my schedule each week to complete evals [evaluations] to improve
> efficiency and decrease stress. I took the necessary steps to make this a reality
> …. Making one small change in my schedule has had a ripple effect with
> everyone else. Everyone is moving forward with change, is communicating
> more effectively, and is resolving conflict in a better way.

As she had often done before, Lana engaged herself and her colleagues in a
collaborative exchange of ideas and strategies to enhance the work environment for
all. In the midst of all this change, Lana began to work with more students and
welcomed that responsibility, even when working with students who struggled. She
pointed out that she viewed her work with students as an opportunity for reciprocal
teaching and learning, and reiterated her enjoyment of continuous learning:

> Well, you are still learning every day. You're learning from your patients,
> from your students, and you're learning from your colleagues. You can
> always learn new things and ways to do things.

Indeed, learning though everyday experience and interaction was a recurrent theme
for Lana. As she finished her third year of practice, Lana was preparing to give
birth to her first child and she knew there were many more changes in store on the
horizon. During a final interview, she reflected on her first 3 years of practice:

> I think I travelled the path I wanted to travel. I just wanted to learn and I
> wanted to become an experienced therapist and I wanted to become a mom
> and have a family …. I felt like a student at the beginning and now I feel like
> an experienced therapist. I went from having a mentor to being a mentor,
> from being a student to having students and teaching students …. I don't feel
> like an expert by any means. I could work for 20 years as a paediatric
> therapist and I don't know if you would ever feel like you were an expert.
> That's just me – because you know you're human and I feel like your
> learning is always an ongoing thing and you can always better yourself.

We now turn to a different story of another participant in our study: Jean.

THE STORY OF JEAN

Jean was a promising novice physical therapist who graduated from an accredited
physical therapy program in the U.S. with a Doctorate of Physical Therapy. Like
Lana, Jean demonstrated excellence in her performance academically and
clinically. She was recognised as a leader in the classroom and excelled during
clinical experiences.

The Setting

Jean began her first job after graduation in a hospital setting where she was involved in outpatient care and aquatics. She changed jobs after a year because of challenges she faced in that setting. Jean felt dissonance and discomfort in some levels of her practice in the hospital, and due to her inability to change the situation she felt the need to change jobs. She moved to a skilled nursing facility as a full-time staff member in her second year of practice. In Jean's third year of practice, after having a child, she became a part-time and "on call" physical therapist in another hospital setting. She felt this was how she could find balance in her personal and professional life and still progress professionally. Thus, during her first three years of practice, Jean worked in three different settings.

Year One In an early interview with Jean she was asked what she looked for in her first job. She had looked for a professional community where there were experienced therapists and where mentorship was available.

> We have a mentor program that lasts a year … she [the mentor] sits right next to me and she's been in the practice for over 20 years. So I really felt comfortable asking her questions and she asks me questions. We talk about patient care, and while I have a patient, what do I do …

Although Jean sought out a mentor in the form of a more experienced therapist, she discovered early that her own instinct and intuition, enhanced by her education, were vital resources in patient treatment. She came to the realisation that she sometimes just "knew" what to do with her patients. Jean felt at ease with her patients and, through experience, became more trusting of her intuition regarding how different patients would react and respond to her in therapy.

Confidence improved on a daily basis. Jean found that after 4 months of practice she was able to teach students who were at her level one year ago. Part of this ability to educate others was attributed to the guidance she had received from her mentor. The mentor helped her with developing broad treatment strategies or principles for patient management, rather than focusing on specific diagnoses.

Progress in communication skills occurred rapidly for Jean. Early on she recognised the need to be an active listener and soon identified communication as her most important skill. Reading nonverbal communication was an essential component of patient care for her. She discussed this in response to a question about how she made clinical decisions:

> … knowing when the patient is ready to progress to the next step has gotten a little bit easier just by reading people's faces and that nonverbal communication.

Year Two Jean soon became frustrated with her first job in the hospital. She felt that her ability to practise in the way she wished was being negatively affected by administrative dictates:

> The longer I am employed here, the more I begin to feel like a number. We have outcomes meetings quarterly where we get told how we should practise. Administration wants us to average a certain number of patient visits … I find this difficult to follow because not every patient is the same.

Because of her frustration Jean changed jobs and moved to a skilled nursing facility at the beginning of her second year of practice. As she progressed through the second year, communication skills became even more critical for her as her professional role and interactions with others expanded.

> I am the professional who is in contact with the director of the group home and I am the one doing most of the discharge planning and consulting nursing when necessary.

Jean began to feel the influence of the workplace culture on her performance as a physical therapist and also felt that she was a positive professional influence at the clinic. Although new in her role at the facility, she became a strong patient advocate when she felt some healthcare providers were providing substandard care. She felt it was her responsibility and obligation to report concerns and try to initiate change. Productivity standards were required in her new position. This was a challenge for Jean in her first job but now, in her second year, she was able to respond to this challenge and still feel that she was providing quality care for her patients. She wrote:

> Although productivity is stressed at my current job, I still feel that I can meet the productivity goal and give excellent care in the process.

Formal and informal opportunities for continuing education were key factors in her ongoing development. Jean found many resources to advance her learning and problem-solving skills, including the patients themselves. At one point she encountered a patient with a thoraco-lumbar rotation dysfunction so severe that the patient came into the clinic with her trunk flexed to 90 degrees. Jean looked through literature and sought consultation from physicians and other colleagues but was unable to find information on how to treat this patient. Jean felt comfortable telling the patient that she was unsure of how to best treat her. She informed the patient that they were going to go through a "process of trial and error" to solve the problem. Jean felt that her honesty gained the trust of the patient and, working together, they were able to achieve a successful outcome.

Year Three Confidence was Jean's greatest area of growth as her role changed from a full-time to a part-time position. Her priority became her newborn child, but she found that she could continue to advance professionally even while balancing new demands in her personal life. Evaluations became more systematic and fluid and treatment sessions progressed smoothly even when changes occurred in the treatment plan. As Jean reported,

> I … start with one thing and see where the patient is going and then maybe you decide to do something completely different than what you thought … and that's not such a big deal.

Her focus was totally on the patient. At this point, Jean was very comfortable and confident in her ability to deliver highly individualised quality care. She continued to stress that active listening to the patient was key to successful encounters.

Jean continued learning from patients and sought relevant literature to support her care throughout her third year of practice. She continued to seek out other healthcare professionals for advice. Learning now also occurred through working with students. She felt that working with students "makes you a better practitioner by far… really makes you think." Jean was a valued mentor and teacher for colleagues as well. She developed educational programs for nurses and other healthcare providers at the agency, including programs for contracture management and wound care. At this point Jean felt she was "someone who could get it done."

By year three Jean was content and satisfied with her profession:

> I feel like I have found my calling in life by serving such a wonderful group of patients. I feel good about what I do for a living, and although I may come home exhausted at the end of the day, a big part of my identity lies with the work that I do with my patients.

Challenges Faced

Most of the challenges for Lana occurred during the third year of practice. Even so, she and her colleagues weathered the winds of organisational change and sought to recreate a supportive community of practice that would enhance their learning and growth as practitioners and enable them to provide high-quality services for the children and families they served and to whom they were so committed.

Finding balance between her professional and personal life in the first year of practice was a challenge for Jean. Her struggles also focused around addressing psychosocial issues in patient care. Jean realised that patient progress was not always related to objective physical findings but often hinged on the patient's mental or psychosocial status. Treatment of the patient as a whole became increasingly significant.

Early in her career Jean also felt that she had a "reality check" when considering her professional role. A rehabilitation physician had requested that *all* physical therapy treatments be approved prior to initiation with patients. She saw this as a barrier to autonomous practice and felt it challenged and undermined her professional role as a therapist. She felt that this real-world barrier was limiting the exercise of her professional judgement; this was disconcerting to her.

Critical Reflections

When Lana entered our study she had been identified as a promising novice therapist. She indeed seems to have fulfilled that promise as she completed the journey through her early years of practice. Lana's openness and commitment to learning through experience, her thoughtful and frequent reflection on that experience as expressed through journals and interviews, her caring, compassionate ways and dedication to her patients, and the supportive community of practice in which she worked were important factors in her early development as a therapist.

Jean travelled a very different path from Lana's in her early career, but she too, seemed to fulfil the promise identified when she entered the study. In our concluding reflections we grapple with the similarities and differences in Lana and Jean's experiences and the question of whether their learning and development as novice therapists might have been influenced by participation in our study.

CONCLUDING REFLECTIONS

Both these novices sought out and recognised the importance of mentorship in their early years of practice. The mentorship they received was structured and somewhat formalised during their first year of practice but this gradually gave way to more informal, but no less important, networks of mentorships through daily engagement with and learning from colleagues and other health professionals with whom they worked. Learning in the context of practice and through interactions with these colleagues and with their own patients was a key resource for professional growth and the development of their professional identity.

The stories of Lana and Jean connect with those of other participants in our study. In spite of many different individual journeys, common themes and transitions emerged in the larger sample of 11 therapists. These themes and transitions are illustrated in the conceptual model shown in Figure 16.1. During the first year of practice, learning was continuous but primarily directed inward toward self, contributing to an increase in confidence in therapist clinical and communication skills. Fuelled by increased self-confidence, therapist learning took an outward turn during the second year as Lana and Jean began to externalise that learning through teaching of students and colleagues. Finally, in their third year of practice, both recognised their transformation from being a mentee to becoming a mentor for some. Was the study itself a form of intervention? The design of our study gave Lana and Jean many opportunities to engage in reflection on their learning and professional development during their first three years of practice. They wrote reflective journals regularly, engaged in reflective dialogue with investigators through interviews, and participated in field observations that were followed by interviews and mutual examination of those observations.
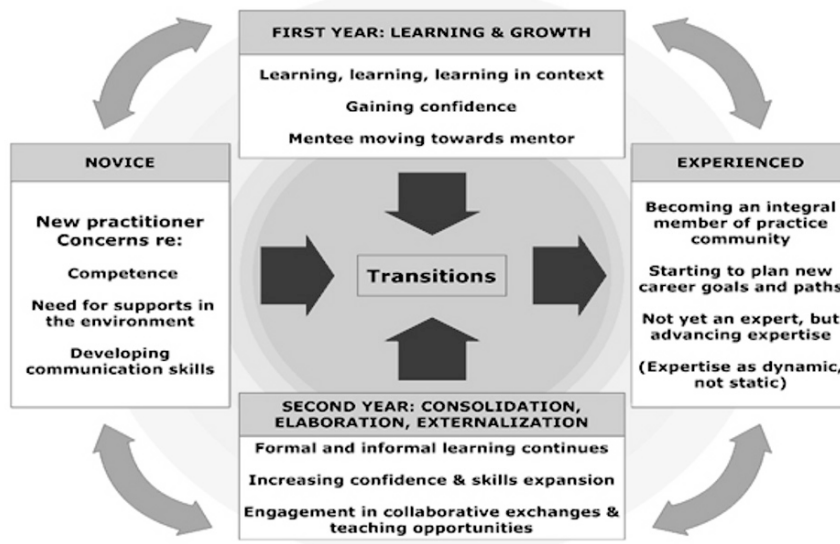
Novice Therapist Development

Figure 16.1. Conceptual model representing the learning and development of novice physical therapists during the first 2 years of practice

As Schön (1983, 1987) and others (Jensen et al., 1999, 2007) have pointed out, professional competence and expertise is not a state of being; rather, it is a dynamic and iterative process that is critically linked to the ability and willingness to engage in reflection in and on practice. The stories of Lana and Jean also resonate with the findings of Wenger (1998), McNally (2006) and O'Brien (2011) that highlight the importance of informal learning, interpersonal relationships, and "supported participation" within communities of practice as central to workplace learning and professional identity formation.

We have described the powerful learning that occurs in the community of practice in those first years of practice, but many unanswered questions remain, such as: How much of the professional learning and growth can be attributed to participants themselves? Did they already have a predisposition toward development of the reflective "habits of mind" (Epstein & Hundert, 2002) that are hallmarks of professional competence and mastery? Were these seeds already sown? If so, to what degree were these habits cultivated and nurtured by the workplace environment and participation in our study?

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BRUCE GREENFIELD AND LAURA LEE SWISHER

17. THE ROLE OF NARRATIVES IN PROFESSIONAL FORMATION FOR STUDENTS

Rational decision-making and "top down approaches" that use deductive reasoning for making clinical treatment decisions do not address the complexity, ambiguities, uncertainties and unpredictabilities of clinical practice. Contemporary research indicates that expert practitioners draw from multiple methods of clinical reasoning including the use of narrative reasoning (Edwards, Jones, Carr, Braunack-Mayer, & Jensen, 2004; Edwards & Jones, 2007; Jensen, Gwyer, Hack, & Shepard, 2007). To the extent that clinicians use narrative to gain a more holistic understanding of the lived experiences of patients with diseases and to clarify the contextual nature of their physiological changes, they are more likely to develop an empathetic, patient-centred relationship (Charon, 2006). The purpose of this chapter is to review the role of narrative in the professional formation of students in healthcare professional training and in clinical practice. We begin with an overview of the principles of narrative in practice-based professional education. The focus is on the professional training of healthcare professionals. After discussing theories and principles of narrative, we present cases illustrating the use of narrative in the training of students toward the degree of doctor of physical therapy. We conclude by delineating implications for current and future use of narrative in healthcare education.

NARRATIVE FOR PRACTICAL KNOWLEDGE: BRIDGING THEORY WITH PRACTICE

Rita Charon writes in her book, *Narrative Medicine*, "narrative can be defined as a story with a teller, a listener, a time course, a plot, and a point. Narrative medicine means medicine that is practiced with narrative skills of recognizing, absorbing, interpreting and being moved by the stories of illness" (2006, p. 3). Narrative can also be used to reflect upon our experiences in order to learn from them.

An example one of the authors experienced several years ago illustrates that point. Working with a patient with chronic foot and ankle problems, I fabricated orthotics to accommodate for the patient's forefoot and rear foot deformities. After several trials, since my efforts did not produce the expected improvement in the patient's condition, I turned to my expert colleague, who fabricated an orthotic counterintuitive to clinical guidelines based on this patient's foot presentation. Remarkably, the patient improved dramatically over the next few weeks while wearing the orthotics. What did this therapist do? Why in this case didn't accepted theory and evidence fit practice? When I asked him what underlay his decision-

making, he shrugged his shoulders and told me he had a feeling that this would work. Hmm …????

This story leads us to quote Charon again: "Any phenomenon has to be contextualized in order to be understood." About narrative she writes (2006, p. 27)

> As medicine matures, perhaps its practitioners will develop the skill to register the singular contexts that donate meaning to each clinical situation and will take upon themselves the responsibility to learn about singular aspects of their patients' lives.

Schön (1991) pointed out that expert practitioners usually know more than they can say (as indicated in the story above). They exhibit a kind of knowing in practice, or practical knowledge, most of which, according to Schön, is tacit, or intuitive. Schön's central concern was how clinicians can gain practical knowledge. He asserted that clinicians add to a practical knowledge not merely through experience alone but through a process of reflection. As Shulman (2004, p. 474) reminded us, we do not necessarily learn through experience, "we learn by thinking about our experience." Similarly, Mezirow (1991) considered that learning through reflection entails strategies that force us to question our experiences, what we know, and how we know it.

We can trace reflective practice back to the pedagogical philosophy of John Dewey (1925) who believed that meaning is embedded in experiences; to uncover meaning, we must explore and reflect on our experiences. The ground-breaking research by Benner, Tanner, and Chesla (1996), exploring the practices of novice and expert nurses, made it exceedingly clear that expert practice is not based solely on age, or the number of years of experience, but on the commitment to reflection in practice. Similarly, Edwards and Jones (2004) and Jensen et al. (2007) found that expert physical therapists used combinations of clinical reasoning including hypothetico-deductive reasoning and ethical and narrative reasoning. We also know that expert clinicians are at times at a loss explaining practical or intuitive knowledge and decision-making. So, based on all we know about models of expert practice, and practical knowledge, what are the implications for doctoral-level education in physical therapy? More, specifically, what can be done in the educational process to facilitate the path from an entry-level education to expertise?

First, we should help our students to develop their metacognitive and reflective skills and to build on their contextual knowledge in order to develop the self-learning skills used by experts. Most importantly, students must develop the skills necessary to learn from their patients. In this chapter we argue that narrative is one important strategy that can help students learn to become more reflective, patient-centred, able to understand feelings in practice and to enhance contextual decision-making.

NARRATIVE IN PROFESSIONAL ETHICS EDUCATION – IDENTITY FORMATION,
MORAL PERTURBATION AND TRANSFORMATIVE LEARNING

In this section we provide two case studies that describe exemplary practice-based educational programs in teaching professional ethics. We reflect on lessons learned and note the importance of integrative practice-based reflection to support narrative and case-based learning in ethics education.

CASE 1

The Setting

This undergraduate ethics program is delivered to physiotherapy students in their final year in the School of Health Sciences, University of South Australia. The teaching team includes faculty with expertise in ethics, psychosocial issues, theoretical models of clinical reasoning and physical therapy pedagogy. A complete description of the course and its outcomes is given in *Physical Therapy Reviews* (Swisher, van Kessel, Jones, Beckstead, & Edwards, 2012).

The Focus

The primary impetus was to improve student feedback for the ethics portion of the curriculum. Previous instructional efforts had not been well received by the students. The course developers shared a conviction that ethical and clinical issues are fundamentally interrelated, that ethical issues often present in ambiguous or ill-defined ways, and that educators should utilise pedagogic strategies to stimulate "transformatory learning" as described by Mezirow (1991), in order to encourage students to reflect critically on their ethical values and beliefs.

The Strategy

The course was placed at the end of the curriculum to enable students to first experience clinical affiliations and then draw on their practice-based experiences for further growth and meaningful learning. Table 17.1 delineates the relationship between the team's ethical educational philosophies and pedagogic strategies/learning activities in the redesigned course.

Challenges Faced

Challenges for implementation and evaluation of the ethics curriculum included the individuality of pace and content of learning, development of reliability in evaluation of concept maps and commentaries, and assessing transformative learning. Each student began the course with a different type of moral reasoning, learned at a different pace, and attached different meaning to their learning. Outcome measures indicated that students improved in their organisation of ethical

knowledge (concept maps) and level of moral reasoning (defining issues test). Moreover, student evaluations indicated that the course was well received and perceived as meaningful. It is more difficult, however, to determine whether students experienced long-lasting transformative learning that would persist into clinical practice.

Table 17.1. Shared faculty philosophies and resulting pedagogic strategies

Shared educational or ethical philosophy	Pedagogic strategies and learning activities
Relationship of clinical and ethical reasoning Ethical and clinical reasoning are fundamentally interrelated.	– Placement of ethics curriculum – Ethical reasoning bridge (Edwards, Delany, Townsend, & Swisher, 2011)
Nature of ethics in professional practice Ethical issues encountered in professional practice are often ambiguous and ill-defined, and may not be resolved through simple application of principles from codes of ethics or deductive reasoning alone.	– Case approach, from students' personal experience (known narratives) provides a foundation for more ambiguous cases (unknown narratives). – Guided reflection on cases – Principles are necessary but insufficient for moral agency.
Professional students are adult learners Learning should be personal, experiential, and meaningful (transformative) (Mezirow, 1991; Edwards, van Kessel, Jones, Beckstead, & Swisher, 2012).	– Moral perturbation, "disequilibrium" and ambiguity encourage students to question their own beliefs, and stimulate reflection. – Concept mapping: each student creates a concept map and commentary.
Ethics outcomes Learning outcomes in ethics can be evaluated.	– Faculty evaluation of concept maps and commentaries (organisation of ethics knowledge) – Defining issues test (moral reasoning) – Student evaluations of course

Critical Reflection

The success of this program provides important lessons for designing educational experiences in professional ethics. In particular, it speaks to the importance of practice-based narratives, reflection on clinical and personal experience, using practice-based cases, and embracing multiple approaches to ethics. In light of the current emphasis on using principles to resolve classic cases in ethics, it is noteworthy that this curriculum included principles, ethical theories, narrative reasoning, ethical decision-making frameworks, and strategies for reflection.

CASE 2

The Setting

The setting for the educational program is a graduate integration seminar developed by Bruce Greenfield and colleagues, conducted with physical therapy students during their second year clinical science course in musculoskeletal rehabilitation at Emory University, Division of Physical Therapy Doctor of Physical Therapy program, Atlanta, Georgia, USA.

The Focus

The primary impetus for the development of the integration seminar was consistent with the practice-based education philosophy to allow students opportunities to reflect on their first-time clinical experiences associated with each clinical science course. The purpose of the integration seminar is to provide students opportunities for self-reflection and to welcome uncertainty and see difficult situations and patients as areas for creative problem-solving rather than unsolvable problems. The goal is to challenge the status quo of practice to raise it to the most effective level of caring practice while demonstrating integrity in all interactions with patients/clients and all stakeholders.

The Strategy

Seminars were integrated during the clinical science course, occurring the day after each student's clinical experience. This strategy was consistent with facilitating reflective learning. Each student was asked to write a narrative about a clinical experience. The objective listed in the syllabus was as follows:

Given an issue or interaction in clinic involving patients/clients, family members/ caregivers, other health professionals, students, other consumers and payers, the student will:

Effectively deal with positive and negative outcomes resulting from self-assessment/ reflection activities by writing a short summary of the experience based on the following questions:

– What was the central issue you encountered?
– What confuses you about the issue/case?
– What feelings did you experience during this issue?
– How did you and/or others address the issue?
– What did you learn about yourself from this issue/case/ encounter?
– What would you do differently if you encountered this issue again?

The guiding questions were based on Shulman's (2004) principles on writing an educative and reflective case. Students were expected to write five self-reflection

summaries (500–700 words) addressing the questions, based on their clinical experiences.

Challenges Faced

The primary challenge was to have the students initially accept the narratives as important components of their educational experience. At first, some students took the assignment lightly, whereas others were extremely motivated. All students were expected to submit a written narrative; some read their narratives to the class and began to identify dilemmas and raise important issues, tell their own stories and ask appropriate probe questions. Gradually, useful lessons emerged and students became more enthused and willing to share their stories. The following exemplifies a typical story told by a student:

> One of the first patients I met was a lady who had just had her fifth surgery on both of her knees from getting total knee replacements that kept getting infected. From the first day I met her she was pretty depressed and crying about the situation that she was in and afraid that she may never walk again... At first I had no idea how to approach the subject or get our patient to stop crying and focus on her treatments but over time it became easier to me to help calm her down and find ways to keep her focused on her actual treatment … The days in which the patient would not do anything were the hardest for me to understand and figure out. One of the most important things my CI taught me during this experience was that you needed to leave the emotional aspect of work at work because if you did not then it would end up eating you up inside and you too would turn into that depressed person.

Critical Reflection

We learned several lessons after the initial integration seminar was implemented in 2009. First, students did not understand the concept of narrative learning and how to write a narrative – so they learned as they went along. Since that initial experience, we have integrated a narrative learning component into our second semester course, *Teaching and Learning*. In the narrative component section of that course, the course instructor (Bruce Greenfield) introduces concepts of transformative learning through narrative and reviews specific principles and steps in writing narratives. The students are asked to each write a narrative based on a learning experience in the past. These are all posted on Blackboard, an educational online learning site, as a discussion thread that allows other students to read each other's narratives and post follow-up questions and comments.

Second, we decided to make the seminar more interactive and have all students contribute by reading their narratives. We divided the class into smaller groups of 5 to 10 students, so that each would have an opportunity to read his/her narrative and have other students and faculty comment. This has challenged time allocation but

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has proved to be a more conformable and richer experience for both faculty and students.

Finally, although student feedback about the seminars has been anecdotally positive for the most part, we have yet to develop specific measures of its overall effectiveness. Part of the problem of finding effective measures is inherent in the very nature of narrative learning, exposing what is not predictable or readily apparent, and contextually based. We continue to debate ways of measuring narrative learning, including the perceptions of clinical instructors about student performance as they transition into the clinic.

CONCLUSION

Both exemplars point to the importance of practice-based cases and narratives as a basis for reflection, development of personal meaning, and transformative learning in ethics education. Moreover, the examples also speak to the importance of intentionality in designing learning experiences. From this perspective, it is important for students to appreciate the educational purpose for practice-based narratives and personal reflection. Although these examples examined education for professional students, our experience suggests that such practice-based strategies are even more important for practising clinicians.

The lessons from these cases also have implications for practice and professional development. Given the importance of reflection, practice environments must find mechanisms to provide what has become perhaps the scarcest resource of all – time. Ways to support effective use of time must be found. Managers should value time for learning as a necessary part of practice. Mentorships should be the normal variant for young physiotherapists, and include strategies to foster reflective practice. Dual charting can be used to develop reflections about meaningful clinical encounters. Audio and video records can be used to help clinicians observe their clinical encounters with patients. Clinicians can be encouraged to interview each other – for example, young or novice clinicians might ask experienced clinicians from physical therapy and other disciplines to discuss their methods of ethical and clinical reasoning, how they have changed over the years, what are the most important sources of knowledge and how they integrate evidence-based knowledge. Audio interviews from competent and expert physiotherapists can be saved into a library or data base.

In conclusion, we should be mindful that as humans we have always shared stories with each other – as children, as parents, as friends, and now as colleagues and as teachers. Of course, as we suggest in this chapter, our telling of stories is not just a way to pass the time, but one of the more important elements in human and professional growth and learning. In some ways, our role as educators is less difficult since we are embracing a taken-for-granted tradition. We should remember that stories call us in, so to speak. We are often asked by students how they should choose what experiences to write about. Our response is simple. It is a response that goes to the heart of narrative learning; that is, we don't often choose

the narrative, it is there and we must find it, be open to the experience – in essence, the narrative finds us.

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ANNE-CHRISTINE PERSSON

18. REPRESENTING PRACTICE THROUGH PROBLEM-BASED LEARNING SCENARIOS

While problem-based learning is a common learning modality, many teachers and educational designers face the task of transforming real problems into starting points for learning. In this chapter I describe and reflect on the process by which authentic patient cases or situations, taken from healthcare settings, are transformed into learning experiences in a problem-based learning (PBL) educational environment.

THE SETTING

The Faculty of Health Sciences (FHS) at Linköping University in Sweden has used the pedagogic framework of PBL since 1986. A fundamental idea in PBL is to use real problems as starting points for students' learning. At the FHS these problems are called scenarios. A scenario can consist of a patient case or a situation that a health care professional might encounter. The role of the scenario in a PBL curriculum is to bring the context of learning closer to the context of application of knowledge (Barrows, 1986). The idea is that by using realistic problems students will see the relevance of the theoretical content and become motivated to take responsibility for their learning. The quality of the problems or the scenarios is an important factor in creating a functional PBL environment (Dolmans, Snellen-Balendong, Wolfhagen, & Van Der Vleuten, 1997). The FHS Faculty Board decided in 1999 to revise all PBL scenarios as a means of improving and revitalising the curricula.

The Educational Development Project: Educational Development using Information Technology (EDIT)

Inspired by the development of the undergraduate medical program in Sydney, we decided to take advantage of web and multimedia options in this process. Using multimedia was seen as a vehicle for bringing reality into the curriculum. The EDIT project was launched in the 2000 (Persson, Fyrenius, & Bergdahl, 2010). The task was to revise and improve all PBL scenarios for the undergraduate programs (at that time medicine, nursing, physiotherapy, occupational therapy, social care and medical biology). A project group was appointed led, by the Centre for Educational Development and Research, and a multimedia team was formed.

THE FOCUS

This chapter describes the process of designing web-based PBL scenarios using real patient cases, along with critical reflections on some of the challenges encountered in that process. I also explore the implications of implementing a web-based scenario system into an entire medical curriculum, where 175 web-based multimedia-enhanced scenarios were produced over a period of 4 years.

A WEB-BASED SCENARIO

A typical scenario often starts with a short and open review of a patient's complaints and background. The scenario, which consists of a combination of text and multimedia material, is designed to unfold gradually, withholding solutions and "answers" for as long as possible in order to have a free and open group discussion. The introduction is usually followed by more detailed information about results of diagnostic examinations performed, treatments given, and the continued course of events. Multimedia, such as pictures and films, are used to a great extent, and together with the hypertext format create a dynamic way of delivering triggers. The film format is particularly well suited to showing communication between patients and healthcare staff. Interesting and problematic situations can be presented in a very realistic way. Films are used to show patients' experiences of the healthcare system, sometimes literally from the patient's point of view. The video camera can move outside the hospital walls, showing patients in their homes and relatives' reactions and feelings. Images and films showing workplace environments or environments from developing countries, for example, can be included. Environmental or public health problems and graphic material can be presented or linked into the system.

Pictures, photos, and films are also used to provide information on diagnostics or treatments. High-quality microscope or radiology images can be viewed. The film format also allows dynamic processes to be shown, such as cardiac function from echocardiography and film sequences from physical examinations. Laboratory results are presented in the form of microscope images or as tables or graphs. Pictures, drawings, some in the form of cartoons, and animations illustrating biological mechanisms are used to trigger studies on cellular or subcellular levels.

Example Scenario

Medical history

Karin Palmblad, aged 17 years, went to see a doctor at her primary health centre. She had had a sore throat and a temperature (39 ℃) for a couple of weeks. Her GP prescribed a course of penicillin since he suspected tonsillitis, but her condition did not improve with the medication.

As of yesterday Karin has been drinking very little and vomiting during the night. She feels thirsty and has not urinated for the last 8 hours. Her temperature this morning was 38.9 °C. Karin lives with her parents and is still at school.

THE STRATEGY

Prerequisites: Creation of the EDIT Database and Equipping Group-Rooms

In order to publish scenarios on the web, a database and a graphic interface for presentation of scenarios was developed. The EDIT database handles text documents and a number of different multimedia formats. Parallel to the EDIT system, a separate multimedia database was designed to manage the use and reuse of such material. A graphic interface for the uploading of multimedia and scenarios were also designed.

Student groups process the scenarios in study rooms equipped with a computer and a projector. The scenario is projected on a screen or on a whiteboard (in some cases an interactive whiteboard or SmartBoard) which allows all group members to see the projected texts and images at the same time. Internet Explorer is used to access the EDIT database, and the study room computers also have the Microsoft Office Package installed.

The Implementation Process and Curriculum Revision

Parallel to the process of creating the database and equipping the rooms, all teachers were informed about the new way to create PBL scenarios. The process of changing all old paper-based scenarios in the medical program commenced in the fifth semester and later extended to semesters six and four. The transformation of all the scenarios in the medical program was then gradually carried out over a period of 4 years. As this work proceeded we found that scenarios were overlapping and sometimes just did not match the actual curricula. Major curriculum changes were needed, and indeed, the implementation process initiated a general curriculum revision. To match the scenarios with the overall goals of the course, all semesters were scrutinised and the different learning modalities evaluated. It was decided that the scenarios should be the "spine" of the curriculum, to which all other learning modalities were aligned. From that point in time all scenarios were reselected and/or created anew. Rather than trying to cover all content, the idea of exemplarity of critical concepts was used for the selection of scenarios. Each scenario should be an example of one or several key concepts reflecting one or several curriculum goals. The order of the scenarios during a semester was also discussed, as was their connection to other learning activities. The curriculum committee made sure that the total overview was not lost as the entire new curriculum developed. To involve all teachers in the curriculum changes, several multidisciplinary thematic groups were formed, each group representing a broad areas of expertise, such as Theme Circulation and Respiration, Theme Endocrine and Reproduction, and so on. The thematic groups were given

full responsibility for the selection and progression of content and the learning activities within their thematic area throughout the curriculum (Bergdahl, Eintrei, Fyrenius, Hultman, & Theodorsson, 2005). This meant that they were also responsible for suggesting suitable health problems or patient problems and for making sure that these were transformed into PBL scenarios. Once a thematic group had suggested a number of problems the process began of developing web-based scenarios out of authentic cases. Clinicians in the thematic groups were given the task of finding authentic patient cases and associated material (such as medical records, laboratory results, medical images, etc.). The PBL scenarios were produced in cooperation with the EDIT project group and the multimedia team.

CHALLENGES FACED

Getting the Right Patient Data from the Clinicians and Keeping the Scenarios Up-to-date

The first challenge related to the teachers' workload. How could we ensure that busy teachers/doctors allocated time to adequately prepare for their teaching responsibilities? We found that transforming a case for the web was something quite different from just copying a patient history. It was easy enough to get the cases, or rather the patient documentation, but it was challenging to motivate teachers to do the necessary adaptations and to think of multimedia triggers. Most teachers were used to working with linear text and could not see the advantages of hypertext and multimedia material, which had rarely been used before. Teachers would come up with a description of a patient case consisting of 10 pages of text and perhaps one x-ray image. The entire problem of the patient would be described in detail from the clinician's point of view, as would the solutions. To address this problem we ran a series of workshops and seminars about how to create motivating and challenging PBL scenarios using new media. We also prepared a guide and a script for the scenario designers to follow. As well, we decided that the scenario designer's name would be published with the scenario so that students could ask questions and give feedback directly to the person responsible. This was part of a strategy to make the scenarios more enduring and always up-to-date, which proved to be effective. Students' feedback on scenarios was also sent to the chairman of the thematic group as well as to the semester coordinator.

Considering the Patients' Integrity and Other Legal Aspects

Once the teachers realised the potential of using pictures and other multimedia material, we were bombarded with pictures, films and animations, which created a new problem. That was the issue of copyright, and questions arose such as, Can we use this? What are the rules for publishing on the net? Who owns the media? What about patients' integrity? We solved these problems in a number of different ways, mainly by producing most of the material ourselves, but also by allocating funding for buying pictures and films. All identifying aspects of the patient cases were

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eliminated or blurred, and we asked patients for permission to use material. We also reduced access to the database to students and faculty at the FHS. When all this was done an important question came up. What about authenticity? Everything that was real in the case was taken out, the patient's real age, living conditions, previous illness, a complex but identifiable life story, authentic pictures …. What was left? A universal patient story!

Since the very idea behind PBL was to use real patients' stories, this was a major concern. However, we realised that most clinicians have so many examples of individual patient stories that they could, without any problem, put together realistic and complex case stories without using identifiable data. The medical story of the patient had to be as accurate as possible. It turned out that the students were extremely observant when it came to detecting any inconsistency in the findings (the x-ray showing left arm when the problem was in the right arm, etc.). Therefore the original patient's "inner" data would always be authentic whereas the "outer" story was altered. The correctness of the handling of the patient was also discussed. What about obvious mistakes in the patient documentation, or what if faulty patient treatment had occurred? An ideal situation exists only in books. Therefore mistakes and incorrect procedures were often retained to reflect what students would meet in real life.

Adjusting the Patient Case to the Curricular Goals

Selecting appropriate patient cases and presenting the scenarios in such an order that progression is achieved is one way to adjust the scenarios to the goals. The level of difficulty of the problem should preferably match students' prior knowledge. This was achieved by the curriculum committee's work and by the thematic groups. But, when it came to actually designing the scenarios, one difficulty was to persuade the teachers to refrain from including too much information in an attempt to cover "everything." The idea of exemplarity cropped up frequently in the discussions between the EDIT project group and teachers. Adjusting to the goals could be done by highlighting content in one case and taking content away in another, trusting in the idea of transfer. From the educational point of view, however, the most important role of the PBL scenario was to make students motivated and curious in order to promote enquiry and self-directed learning activities.

Creating Challenging and Motivating Scenarios

Using problems to promote learning in a medical context was first implemented in Canada, where realistic patient cases were used to replicate the clinical reasoning process (Barrows, 1986). However the cases or scenarios in a PBL curriculum serve many purposes. While trying to understand the problem, students activate and inquire into their prior knowledge, in the process discovering their own learning needs, which leads to a self-directed learning process.

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Previous studies have shown that pictures and films stimulate and motivate students' inquiring process (Balslev, De Grave, Muijtjens, & Scherpbier, 2005; Balslev, de Grave, Muijtjens, Eika, & Scherpbier, 2008). What we also noted was that the gradually unfolding quality of a web-based scenario could be used to trigger curiosity. The gradual unfolding of new triggers kept students in a state of suspense. The storytelling and the use of dramaturgic tools also proved to be important for the ability of scenarios to initiate and maintain motivation during the tutorial. The more the students had to interpret and discuss, the better they liked the scenario. Pictures and films inherently have this quality, which could explain why students appreciated the multimedia content so much. According to Jonassen (1997), "ill-structured and messy" problems are effective as tools for learning problem-solving. Our findings seem to be in line with this. From the students' point of view, the most interesting problems were those where there were no obvious solutions, or even contradicting information. Students realise that the world that they will meet is a world of uncertainty and ambiguity, and they prefer problems that force them to be both analytic and reflective in their approach. To create such problems, however, requires a great degree of awareness of the students' level of understanding. Creating an adequate degree of complexity paradoxically seems to be a challenging and time-consuming task for the scenario designer.

Lessons Learned

Today, almost 300 web-based scenarios have been produced for the different programs, 175 just for the undergraduate medical program. From this process, we learned that some factors are more important than others in crafting motivating and engaging scenarios out of real patient cases. These include:

− A high degree of realism and relevance to the future profession; the idea that "this could be me standing there trying to figure out this patient's problem"
− A story well told, making the patient or the relatives come to life
− Something in the scenario that makes the students surprised or perplexed – How can this be? It can't be true … It doesn't fit with everything else I know
− Ambiguity and uncertainty – some of the lab results indicate one thing and other aspects indicate something else – a bit of a mystery
− Complex and multi-factorial problems – unclear results – difficult to understand or missing information – just like real life!
− Emotionally provocative, how awful – can this really happen – poor her!

Frequent use of multimedia, but also an awareness of how and by whom a story is told, are important factors to keep up students' interest and motivation.

CONCLUSIONS

Multimedia, in the form of pictures and films, made the patient cases more realistic and believable for the students. The complexity of the problems that students will face later in their careers could be easily illustrated in a way that sometimes would not be possible even on a ward. To look at the world from many different angles: from the patient's point of view, seeing a mother's tears, the employer's concern, the worries of a future colleague trying to get a bed for his patient, a patient trying to cope with the pain from a kidney stone while waiting for the doctor, the conditions for a surgeon in a developing country, and so on, certainly brought the complexity of the real world as it is much closer to the students. Also other forms of multimedia material increased the realism of the experience. Ultrasound films, x-ray and MR images supported the impression of authenticity, making students aware of the importance of knowing how to interpret and understand, for example, an ECG-curve or how to look at a radiology image. Students realised that "this is it – this is what I will do later!" "These are the demands that will be put on me as a professional."

The EDIT project also had educational implications in many other ways. The planning of scenarios and of semesters, in general, gained an overview, and more attention was paid to the sequencing of different learning activities (Carlile, Barnet, Sefton, & Uther, 1998). Similar experiences were reported when web-based scenarios were introduced in Sydney. A better overview of the curriculum influenced curriculum design and management and created productive faculty discussions. We observed an increased pedagogical awareness, increased discussions among teachers and tutors, and more contacts between the undergraduate programs at FHS as a result of the implementation process. The process started by the EDIT project made a strong contribution to a review of the entire medical program, and resulted in a revised curriculum that was implemented in 2004. Important outcomes of the project included the introduction of criteria for the selection and sequencing of scenarios. A plan for all scenarios in the medical program led to increasingly complex cases and less duplication of problems.

ACKNOWLEDGEMENTS

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19. ADVANCING MALAYSIAN PRACTICE-BASED EDUCATION

In Adult Second Language Learning

As an international language of communication, English in Malaysia is considered a critical language of commerce for Malaysia to maintain its competitive edge and for graduates to work and practise in a global context. It is a key to successful education for practice for these students. The official role of English in Malaysia is that of a second language (L2), with Malay as the first language and Tamil or Chinese as the third.

The recent growth of the use of English in the "outer circle" as delineated by Kachru (1985) in countries such as Singapore and Malaysia has been extensive. In Malaysia the growth of English has been steady, and increased efforts have been made by English language researchers and teachers to encourage English proficiency among school students, particularly secondary school students. Initiatives have also been taken to bridge the gap that exists between urban and rural school students in English language proficiency. In recent years, attempts by researchers to promote the use of English and inculcate the reading habit in rural secondary school students in Malaysia have shown positive effects.

The English language within tertiary education has been described by some academics as "functional," due mainly to the teaching approaches, the curriculum, learning outcomes and assessment patterns. English language teaching approaches correspond to second language teaching approaches where the emphasis is placed on the mechanics of the language, usage in daily life activities, and capacity for understanding global perspectives and issues. Despite the focused approach, many Malaysian English language researchers agree that there has been a decline in Malaysian students' English language proficiency in recent years. There is a need, therefore, to understand how vocabularies are applied and integrated in English in various roles and contexts. In this respect, research in L2 vocabulary development in English stands to contribute significantly to educational research conducted in pedagogical contexts in Malaysia.

The chapter reports on a research project carried out with university students to gain a better understanding of how adult second language (L2) tertiary learners advance vocabulary acquisition. The motivation to conduct this study was linked to the increasing importance of English language vocabulary proficiency in English as a second language (ESL) tertiary settings, and its strong connection to meaning construction in reading.

BACKGROUND – SECOND LANGUAGE STUDIES

Comparatively little is known about how adult L2 learners adapt lexical and inferencing strategies during reading, in tertiary environments where learning is socially constructed, and where there is increased interaction among learners themselves and between learners and instructors. There is a need to focus on tertiary L2 learners as they learn and use language at an academic level that is qualitatively different from other registers of use.

Experimental and statistical studies in applied linguistics have identified lexical knowledge as the most perceptible aspect of the learners' capacity to read and understand texts (Nation & Coady, 1988). More recent research in second language vocabulary studies (Read, 2000; Pulido & Hambrick, 2008) has further confirmed the links between second language reading comprehension and vocabulary knowledge. Given the significance of vocabulary knowledge for oral and written communication, it is clear that there is a need for explicit instruction of vocabulary strategies and for vocabulary awareness to be embedded in L2 language teaching.

Studies of vocabulary strategies have shown that there are variations in the way learners use these strategies. Active strategy users, described as those with a greater awareness of strategies and who have taken steps to adapt them according to the task or situation, were found to be more successful, whereas poor learners, who had minimal awareness of such strategies often experienced poor knowledge of word learning (Sanaoui, 1995). Other researchers, such as Waring (1999), have proposed that learners' knowledge of words may be mediated during the mental processes of receiving and producing language.

THE STUDY

The Setting

Vocabulary inadequacies are exacerbated especially when the L2 learner is in a tertiary academic setting, and is expected to use specialised vocabulary or technical vocabulary competently in both written and oral communication. Against this background, a study was conducted among 130 L2 university students to investigate the vocabulary learning strategies employed by them in acquiring vocabulary, and the effectiveness of explicit vocabulary teaching for vocabulary development. In this study, the basis for lexical representation was examined by exploring the issues of acquisition within the ESL pedagogical paradigm. The study also examined vocabulary development by looking at the effects of explicit teaching on word production. The outcomes of the study enabled validating a conceptual theoretical L2 vocabulary model to account for the development of pre-receptive (PR) to productive (PV) processes of vocabulary development.

The 130 students who participated in the study came from a first year engineering undergraduate course. The researcher had taught communication in engineering for five years prior to conducting the study and was actively engaged in teaching *Communications* in the engineering unit during the research study period. The students in the course of study were of essentially Malaysian

background, with either Mandarin (Chinese language) or Bahasa Malaysia (Malay language) as their first language (L1). Approximately 75% of the students in the tertiary institution had come through the Malaysian school education system where they had learned English as a second language.

The Focus

The main purpose of the study was to analyse the vocabulary learning patterns in tertiary L2 learners and to establish a model to introduce the notion of the prior vocabulary knowledge of the L2 learner, and also to ascertain whether pre-receptive vocabulary had any influence on how the learner acquires vocabulary. According to educational theorists such as Piaget, learners are in "cognitive conflict" when they come across new knowledge that cannot be related to prior knowledge. The new knowledge, or in this case, the new lexical unit/item that the L2 learner encounters, needs to be adapted, assimilated and then accommodated as mental representation into the lexical knowledge of the learner. The process is then assumed to move along a continuum through the lexical positioning of new vocabulary and by the actual inferencing of the new lexical item, which leads to productive vocabulary. Ultimately, the purpose of the study was to establish an L2 vocabulary model to account for the development of PR to PV processes of vocabulary development.

The Strategy

The study adopted an overarching approach based in pragmatism which has both phenomenological and ethnographic dimensions. The study employed a mixed method design to achieve the research objectives. It applied a case study analysis of the inferencing strategies employed by L2 learners and the influence of teaching explicit inferencing strategies in the development of vocabulary in L2 learners. In Phase One, qualitative methods involving the use of verbal protocol analysis (VPA) or think-aloud procedures were used to elicit information as to the strategies used by L2 learners in developing and acquiring vocabulary. The strategy involved collecting qualitative data in the form of words that depicted the rich experiences of participants, and then collecting numeric data to reaffirm the outcomes from the initial data gathered (informed by Ary, Jacobs, & Razavieh, 2002).

Procedural data analysis from Phase One supported the development of a theoretical model of vocabulary development in L2 learners. Phase Two of the research involved verifying the validity of the conceptual theoretical L2 vocabulary acquisition model developed and the underpinning proposal for explicit instructional mediation. Two control groups and two experimental groups took part in the study.

Specially developed vocabulary proficiency pre-tests were administered to multiple groups of participants for measuring vocabulary proficiency before selecting identical groups of participants. The influence of explicit teaching instruction and levels of vocabulary development was measured through the use of

specifically developed criterion-referenced tests (L2 vocabulary measurement instruments). This was followed by the selection of matching control and experimental groups for explicit instructional mediation in a constructivist peer learning environment. Quantitative parametric tests such as t-tests assessed the significance of the difference in means between control groups and experimental groups to study the influence of explicit teaching of vocabulary strategies.

Challenges Faced

Wide ranges of test items and methods have been used for measuring vocabulary proficiency. According to Read (2000), discrete vocabulary tests that are selective and context-independent may be deemed sufficient measures of vocabulary knowledge, but at the same time it is difficult to establish if they are not much different from tests of grammar. The author designed criterion-referenced diagnostic/achievement tests which assessed L2 vocabulary in context through appropriate reading texts. It was necessary to select plausible materials and adequate procedures to obtain valid and reliable results. A variety of tests were required to address diverse aspects of the lexicon.

Two important measures taken in the study are integral for the validation of the conceptual model of L2 vocabulary development created through the study. Firstly, it was necessary to design a context-specific vocabulary proficiency instrument for measuring prior knowledge and vocabulary proficiency in all the participant groups (experimental and control groups), referred to in study as the PR vocabulary of L2 learners. Secondly, it was also important to ascertain whether any vocabulary gains were achieved through the explicit teaching of strategies to experimental groups.

Waring (1999) among others has emphasised the importance of assessing vocabulary on a multi-dimensional scale. Word knowledge was traditionally assessed in a decontextualised, dichotomous fashion. What it means to know a word, however, cannot be measured without taking into account the domain and context of reading. The CRT-diagnostic pre-tests for measuring vocabulary proficiency attempted to measure a range of lexical knowledge such as generalisation in domain (knowing the definition). This is important because defining a word in context relates to knowledge of linguistic semantics in context. In reading each sentence, definitions and contexts carry crucial roles, and must be examined in order to assess the reader's vocabulary proficiency. Context and definition combine and contribute most to reading comprehension. Additionally, the tests measured application of lexical information gathered from the texts (knowledge about use) through tasks such as explaining meaning of technical vocabulary in context, in short sentences.

Vocabulary researchers have acknowledged the significance of the lexicon as a measure of being able to learn to learn and use a language. The notion of vocabulary knowledge, in particular, lexical competence has been the centre of scholarly investigations and the breadth and depth of lexical competence has been emphasised (Nation, 2005). The tests analyse breadth of meaning (knowing different senses of a word) and precision of meaning (knowing how to use the

word in different situations) through summary reading tasks and tasks that require accurate selection of words for sentence completion. Learners' vocabulary size has been found to correlate directly with reading comprehension) and with writing ability (Beglar, 2000).

The criterion-referenced diagnostic tests designed through the study measured the ability of participants to use contexts to determine the meaning of words, and measured the participants' level of vocabulary proficiency. Similar criterion-referenced achievement post-tests were administered to the control and experimental groups to measure vocabulary gains (if any) in the experimental groups where specific instruction in vocabulary learning was conducted, and for comparison with the performance in vocabulary tests by control groups where standard vocabulary instruction was carried out by experienced colleagues.

Waring (1999) has claimed that metacognitive knowledge is necessary for learners to be able to report on their vocabulary knowledge proficiency. Additional self-reports on the vocabulary learning strategies participants employed, gathered through retrospective verbal accounts, provided further information about participants' metacognitive knowledge competence.

Critical Reflections

The data gathered through verbal protocol analysis (VPA) were examined to identify patterns, consistencies, repetitions and expressions significant to the subject of the investigation. After collection of the verbal protocols on audiotape they were transcribed and then examined to draw out codes according to a pattern or representation. Interrater reliability was established with an experienced colleague who was a native English speaker. All protocols were coded independently by the researcher and the colleague and meetings were held to review the coded protocols for reliability checks and for discussion of difficulties in coding. The verbal protocol data gathered were transcribed according to the orthographic transcription conventions recommended by Lemke (1995), who referred to thematic content as that which represents processes, activities, and relationships and the participants in these processes, and circumstances of time, place, manner, means, etc. Orthographic transcription is a verbatim record of what is said by participants which includes repetitions, pauses, etc. Excerpts given here from the VPA analysis illustrate how students negotiated reading and indicate some of the strategies used.

> I like reading a lot /and whenever I come across new words like // the first thing I do is try to understand it from the sentence itself /I read it over and over again and try to figure out the meaning/ in case I don't understand I try to find/ look up the words usually/ I use an electronic dictionary so/ if I get the meaning/ I try to get the synonyms to understand the words better/ that's/ the strategies [sic] I usually use […]

> One way is to read widely// if you read a wide variety of books/ magazines and reading materials// you are bound to bump into words you looked up and

it would be used in a different sentence /and you get a different angle of it/ in terms of using it// well if you keep writing and using it/ it means sooner or later/ it's going to stick in your mind /and recalling it will also be easier […]

The reading tests were designed for first year undergraduate engineering students, whose native language was other than English. The tests provided an evaluative measurement of participants' knowledge of technical vocabulary at academic tertiary level, in the first year of undergraduate study in engineering.

The pre-receptive-productive (PR-PV) L2 vocabulary development model that emerged from the study highlights the various stages occurring in the L2 learner's metacognitive schemata, and in vocabulary development. When participants encountered new words in texts they attempted lexical access for them, and the resultant processes that occurred led to successful learners converting previously unknown words into productive vocabulary. When participants failed in their attempt to connect to lexical access, they turned to vocabulary inferencing strategies, as reported by most participants in the study.

The meaning construction processes used by L2 learners relied on a range of knowledge. Domain knowledge or background knowledge was cited as particularly useful for developing strong connections to meaning. Lexical positioning allowed L2 learners to assess knowledge in hand and check for corresponding schemata in their established L1, or in the developing L2, in this case English. As some participants stated, lexically dense reading delayed word production, mainly due to their lack of knowledge of technical or discipline vocabulary. Despite the challenges presented during reading lexically dense texts, the findings suggest that in order for L2 learners to progress with comprehension and meaning construction, they should be given increased reading opportunities for developing larger vocabularies.

Sixteen major inferencing/vocabulary learning strategies were identified from the verbal protocol analysis. Subcategories arising in some inferencing strategies were defined and numbered using decimal notation. Four new strategies or variants of strategies were observed to have been used by the participants. Each inferencing strategy was identified as to whether it corresponded to memory, cognition, metacognition or a social strategy. During work on the thematic descriptions of strategies, it became clear that the participants used inferencing strategies in unique and individual ways.

IMPLICATIONS FOR PRACTICE-BASED LEARNING

L2 Learning

The findings from the study elucidate the various strategies and knowledge sources the L2 learners referred to in order to infer the meaning of unknown words encountered in the texts. They indicate that that contextual learning of word meanings can be encouraged in a tertiary L2 environment. Through contextual understanding of new words, L2 learners may learn not only the syntactic and paradigmatic relations of the new words with other words but may also use these

associative links to form schematic patterns in their mental lexicon. The findings further suggest that both content and context play significant roles in the extent to which L2 learners interact efficiently with reading texts. The outcomes from the study may have pedagogical and theoretical implications for curriculum developers, instructors and policymakers in second language tertiary English learning contexts.

Implications for Exemplary Practice-Based Learning

This study has implications for practice-based learning in general. For example, exemplary practice-based learning should provide increased opportunities to L2 learners for word production and for learning both common and technical words in context. Word knowledge is a complex system that includes both receptive and productive vocabulary systems. L2 learners in this study considered new words encountered to be part of their mental lexicons only when they began to use the words in their own writing and speech. This suggests that integrating the usage of low frequency words in classroom activities advances long-term retention of words, which in turn leads to productive vocabulary development. In tertiary learning realms it is necessary for learners to acquire many words, as well as to be proficient with the meanings of related technical words. Learning vocabulary in classroom settings is also important before working and learning in field settings where knowledge of the second language is needed.

Increased interactions with peers may facilitate knowledge production in socially constructed learning environments. The aspects of inferencing strategy instruction should include not only explanations of the strategies and their functions, but also modelling the use of strategies by the instructor, and guided practice of strategies matched to tasks and contexts. Learners must be made aware that to convey their ideas clearly and effectively they must use varied sentence structures and choose appropriate vocabulary for an academic audience. University students need to learn the metalanguage (rules of language) as well as vocabulary and basic communication to be effective and successful using the second language in work and practice environments.

For students to take up the challenge of becoming proficient in L2 usage, as well as becoming reflective and insightful readers and efficient writers, teachers should engender experiential learning experiences for communication through sustained and inspiring teaching. Graduates need to be able to learn, to communicate and to practise capably in their L2 language.

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20. SIMULATING THE REAL - MANUAL CLINICAL SKILLS TRAINING

Conditions and Practices of Learning through Simulation

This chapter describes and discusses the use of computer-based simulation in undergraduate nursing, to train basic manual clinical skills, using the example of urethral catheterisation at a clinical skills centre. It aims to give a rich account of the pedagogic arrangements and settings for such training, and to explore students' views on necessary conditions and their practices of learning in this context.

THE SETTING

The Linköping Model of Professional Health Care Education

The context of our case is the nursing program within the Faculty of Health Sciences at Linköping University, Sweden. Since 1986, a common pedagogical approach has been used for all study programs, including physiotherapy, occupational therapy, social care management, speech and language therapy, medical bioscience, biomedical laboratory science, nursing, and medicine (Kjellgren, Ahlinder, Dahlgren, & Haglund, 1993). The case thus draws on a 25-year history of documented organisational and curriculum reform within a one pedagogical framework using problem-based learning (PBL).

This pedagogical approach has been based on an integration of biomedical disciplines and clinical specialities, and collaboration between students from different programs in interprofessional tutorial groups. The interprofessional learning (IPL) activities are carefully staged and recur throughout and across the different professional programs. Nationally and internationally published reviews of the programs have demonstrated favourable results (see e.g. Antepohl, Domeij, Forsberg, & Ludvigsson, 2003; Faresjö, Wilhelmsson, Pelling, Dahlgren, & Hammar, 2007; Swedish National Agency of Higher Education, 2007).

The underlying conceptual structure of PBL as a pedagogical approach can be described as moments of understanding over time of how to improve student learning, with the pragmatic intention of moving the context of learning closer to the context of application of knowledge (Barrows, 1985). It draws on cognitive theories of the function of human memory and their implications for learning (Norman & Schmidt, 1992) and phenomenographic research on learning in higher education (Marton & Booth, 1997). These perspectives have also been

supplemented with a social constructivist emphasis on the social dimension of learning, where meaning is constructed in interaction with others (Savery & Duffy, 1995).

Summarising these previous understandings of the rationale for the applied pedagogic approach, the dominant focus has been on students, their thinking and learning processes, and the pedagogical arrangements that are required to support learning. The issue of how best to support the development of clinical skills and how to integrate educational activities, both theoretical and practical, has always been a challenge in this context.

The changing structure of health care (along with decreasing clinical inpatient care, reduced numbers of patients in hospital, and a growing emphasis on outpatient care and day surgery) provides fewer opportunities for the training and updating of clinical practice skills. These are critical issues in both undergraduate students' training and continuing professional development.

In an attempt to address these challenges, the Faculty of Health Sciences and the local health care provider, the County Council of Östergötland, jointly decided to establish "Clinicum," a centre for clinical practice skills training and simulation. It has been operating since 2008 and is used for full-scale training for undergraduates and for specialist and continuing training of professionals. This clinical skills centre provides the context of our case.

Over the last 20 years, the evolution of computerised simulation for skills training in health care education has accelerated (Khan, Pattison, & Sherwood, 2011). Innovative skills training provision, often in special clinical skills training centres, has challenged educators to arrange simulation-based skills training in a manner that harmonises with educational ideas behind PBL. In this chapter we showcase an example of undergraduate nursing education, where students, working in pairs, dialogue with each other to learn the practical skills of catheterisation. We provide an overview of the literature of simulation-based training in health care as a background to our case. We discuss pedagogical arrangements for the skills training session and discuss the implications for learning in simulation in the light of recent research.

THE FOCUS

Simulation-Based Clinical Skills Training

Simulation-based training of clinical skills and handling of emergency situations has become increasingly important in health care education during the recent decade. The need to ensure quality of care and patient safety, reduce errors and increase patient safety has become part of the agenda for every hospital. Simulation-based training is one answer to these problems. However, praxis oriented research into simulation-based training and consideration of learning and transitions in professional knowledge perspectives is still lacking (McGaghie & Issenberg, 2010).

With a focus on technical development, the learning perspective in skills training simulation has become highly significant (Bradley, 2006). Tun and Kneebone (2011) are certain that simulation is here to stay and that its role will increase. They believe that simulation offers particular benefits for mastering procedural skills in which motor skills are crucial. From the review by Issenberg, McGaghie, Petrisa, Gordon, and Scalese (2005) it is known that simulation training can be an effective way of learning procedural skills. Training with a virtual reality simulator has been shown to enhance factors that facilitate cognitive and motor learning, such as repeated testing, feedback and self-controlled practice (Wulf, Shea, & Lewthwaite, 2010). Hatala (2011) states that the question has now changed from "Is simulation effective?" to "How is simulation effective?"

THE STRATEGY

Simulating Catheterisation in Undergraduate Nursing Education

Urethral catheterisation is a basic skill in nursing, and in Linköping it is a component of the undergraduate nursing curriculum during semester two of the program. The UrecathVision™ program is used to simulate an authentic catheterisation event. The intended learning outcomes of the module are that students should be able to organise actions, explain and value choices of materials, procedures and approaches, touch and talk with patients and be sensitive to their experiences.

In the following, we provide a description of the technical features of the simulator, and explain how the simulation session has been pedagogically designed, within a problem-based approach, to support students' learning. Finally, we show how students learn in the simulated catheterisation session, based on observational and interview data from a recent research study, and discuss the implications for educational design in simulation.

The Simulator

UrecathVision™ is a portable virtual reality task trainer with haptic properties (Figure 20.1). Introductory procedures are explained using multimedia and learned through a combination of reading and interactive exercises on the simulator screen. Some tasks are supported with instruction videos. When students insert the catheter they can follow their performance on the computer screen. Anatomic cross-section features change when actions are taken. Haptic properties enable students to feel resistance during procedures. Performance quality is measured and presented upon completion (http://www.meleritmedical.com). Assessment addresses various aspects of the procedure such as angle of delivery, speed, attention to process and technical accuracy, and a summary of the performance is displayed on screen (Jöud, Sandholm, Alseby, Petersson, & Nilsson, 2010).

Figure 20.1. Simulation skills training with UrecathVision

The Problem-Based Pedagogy

Problem-based pedagogy frames the students' learning experiences and sets out the intended learning outcomes formulated as expected competencies, such as being able to sequence actions, justify the choice of procedure and describe the situation from the patient's perspective. Three phases are undertaken:

– preparation phase: students reflect on their experiences, pre-understanding and learning needs (starting a learning cycle like this is common to problem-based pedagogy). Students generate ideas and identify their level of knowledge as they consider issues relevant to the scenario;
– realisation phase: students practise with the simulator in pairs and ask questions;
– follow-up phase: students gain feedback on performance using an assessment form from the simulator. Haptic (feeling tissue resistance) and visual feedback (the monitor displays how the catheter moves through the process, for example) is given. The performance is video-recorded. Observation and interviews immediately after the simulation training provide reflection and follow-up questions facilitate elaboration on the students' experiences.

What and How the Students Learn

A recent thesis (Johannesson, 2012) helps us appreciate students' experiences of how the simulation training is enacted, how the learning takes place, and challenges faced by students during the process. In summary (Figure 20.2), the students learn manual skills and both how to perform the procedure from a situational perspective and how to behave from a professional perspective. They

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learn by preparing, watching, practising and reflecting. The simulator contributes to the learning by providing opportunities to prepare for skills training, to see the anatomy, to feel resistance, and by allowing students to become aware of their performance ability. Some of the students' voices are interspersed in the text that follows, based on original data from observational studies (Johannesson, 2012).
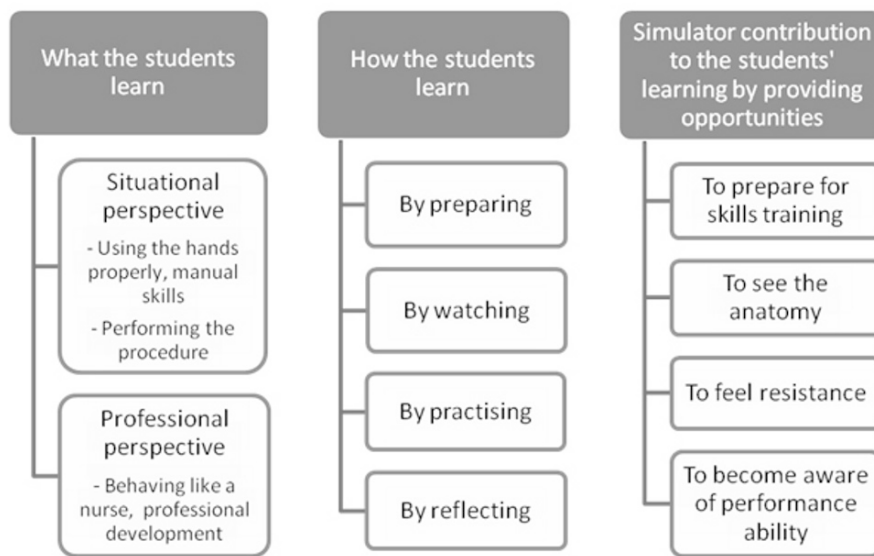

Figure 20.2. What students experienced and how they felt about their learning using simulated skill training (Johannesson, Silén, Kvist, & Hult, 2012)

The students practise manual dexterity skills and learn to modify touch and pressure: "It becomes very, very resistant, so you have to press pretty hard." They can focus on procedural and technical skills rather than having to focus on the patient: "I focused only on how to do it, not on the patient." Some use a structure, performing and describing one activity at a time whereas others gradually remember the things to do, albeit in the wrong order: "To carry out all the steps, that is what you feel you need to practise the most."

In watching the videos, students see how they move and manage equipment: "When I wear the clothes, I start to think that I am a nurse and I am going to do this; if I was wearing normal clothes it might seem less serious." They find that the images of patients' faces in different scenarios provide a sense of a real situation: "It provides an image of a real patient."

Being able to see what they were doing is important. Cross-sectional screen images are helpful: "You have to take it really easy and watch to make sure that it is actually inserted." Carrying out the technique in pairs enables them to watch

each other's performance and learn from each other, as this students' question to her peer demonstrates: "Did you feel that watching me do it wrong helped you to do it right the next time?"

Simulation provides opportunities to repeat, test and practise many times, allowing mistakes to be made in a safe environment: "In this situation it is OK to make mistakes." Repetition and practice enable students to build confidence without the anxiety of harming anyone: "You learn by doing something wrong too, and here it is OK to make mistakes, so it is useful." Students like to practise with a peer: "It is good to work in pairs. We think in different ways and we complement each other very well." The simulated situation provides opportunities for reflection on students' own skills: "I've been thinking about how I perform." Students also find it valuable to have someone to reflect with: "It is good for students to work in pairs so you have someone to discuss with. We talk to each other and we can share our thoughts and ask each other questions." The simulator is equipped with an assessment module to continuously measure performance quality. The students find this motivates them: "I got rather high scores and then I felt pretty good; it was a confirmation of what I can do."

CRITICAL REFLECTIONS

Based on students' learning of manual skills, performance skills and professional behaviour, we have highlighted perspectives and experiences in simulation skills training. These are presented in Figure 20.3. The figure illustrates the student in the centre with feelings of motivation, meaningfulness and confidence as central features of learning clinical skills with simulators. The next two circles show what the students learn and how they learn clinical skills. These features can be taken into account by creating educational conditions for variation, realism, feedback and reflection. The outer circle summarises how the simulators in these studies can support the acquisition of manual and procedural clinical skills by providing opportunities to prepare for skills training, to see the anatomy, to feel resistance to catheter insertion and to become aware of performance ability. Conditions that support students' learning of clinical skills are provided through a safe environment; opportunities for repeated practice, active and independent learning; use of interactive multimedia; and providing a simulation tool that is easy to use.

CHALLENGES FACED

When organising simulation clinical skills training in health care education, if good conditions for learning are to be achieved, we have found it important to address the following challenges:

– encouraging independent learning with and without a teacher, with a peer or in a group
– providing a realistic authentic environment and clothing to enhance seriousness
– use of video to record performance, enabling reflection and feedback

– use of a realistic simulation device to enhance seriousness
– enabling peer learning for common reflection and feedback
– opportunities for repeated training, necessary for motor learning
– assessment to provide feedback and to encourage seriousness.
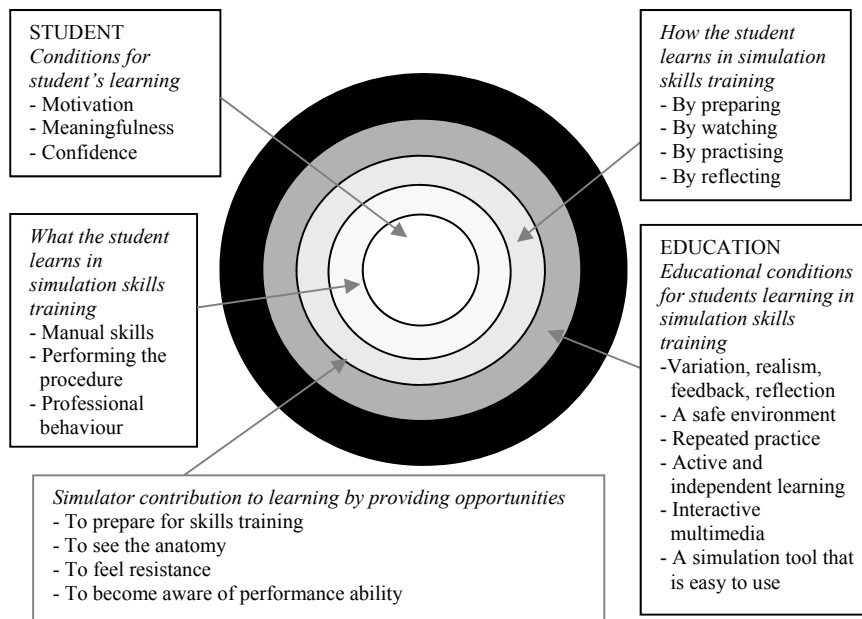
Figure 20.3. The "onion model" of layers showing conditions for learning in skills training through simulation (Johannesson, 2012)

CONCLUSION

Our example shows that with support from simulation skills training, students can develop manual skills ability, procedural performance and professional behaviour. They learn through their senses. The simulation tool in itself and the arrangement of the simulation situation can trigger optimal use of the senses. The experiences of performing, and conscious reflection on the performance, preferably with peer students, emerge as important in the learning process.

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21. PREPARING STUDENTS FOR ETHICAL PRACTICE

THE SETTING

Student health professionals learn from, and make a significant contribution to, healthcare practice and education and to communities. The moral or ethical climate of healthcare and educational institutions and the values of the communities students come from and live within are significant.   In this chapter I suggest that institutions and communities have the potential to help or hinder student professionals' moral progress and to facilitate or compromise the development of ethical practice and professional virtues or moral dispositions. The key players or stakeholders who need to be considered in relation to preparation for ethical practice include students, practice colleagues, lecturers/teachers, service users and their families. Learning about ethical practice does not take place only or primarily in universities or colleges. The context of learning for ethical practice is multi-faceted and complex, comprising early socialisation and both formal and informal learning activities. It is not, therefore, the responsibility of lecturers or teachers only; preparation for ethical practice is everybody's business. This chapter explores the nature of ethical practice, care failures that have resulted in service users experiencing indignity in care, strategies that can contribute to sustainable ethical healthcare practice, and challenges that may be encountered.

THE FOCUS

Ethics is concerned with doing the right thing and with being a certain kind of person. The focus of ethics is on what we ought to do and how we ought to be, on our conduct and our character, and on our actions and omissions. Ethics requires reflection on the nature of our relationships with other humans, with other species and with the environment. Healthcare practice is necessarily anthropocentric, concerned primarily with the wellbeing, interests and rights of patients, families and staff. However, issues that impact on health do require engagement with the interests of animals (e.g. in medical research) and the environment (e.g. pollution and living conditions, more broadly). The remit and scope of ethics, then, are micro (relating to individuals), meso (relating to organisations), and macro (relating to society and political contexts).

There are different approaches to ethics. Normative or prescriptive ethics relates to the theoretical perspectives that provide guidance and prescribe how we ought to act and be. The four principles approach to biomedical ethics (Beauchamp & Childress, 2009) prescribes that professionals respect the autonomy of the patient, that they do good (beneficence), avoid harm (non-maleficence), and treat people

justly or fairly (justice). Other approaches focus on doing one's duty (deontology), respecting rights and weighing up the consequences of actions so the greatest good is brought about for the most people (utilitarianism) (see Gallagher & Hodge, 2012). An approach that focuses on the character of the professional or student is virtue ethics. Virtues are moral dispositions developed over time, through experience and a process of habituation (Banks & Gallagher, 2009). Classical virtues of courage, justice, temperance and prudence and theological virtues of faith, hope and charity or love are likely to be familiar to readers. When invited to write character references, it is likely that professionals will think of virtues such as honesty and trustworthiness. Other professional virtues that should be considered are respectfulness, justice, wisdom, courage and integrity (Banks & Gallagher, 2009). It becomes clear that promoting ethics in healthcare practice involves consideration of the different components of ethical competence and also attention to the moral climate of the organisations where students and professionals work.

Gallagher (2006) described five aims of ethics education: knowledge aims, perceptual aims, cognitive aims, behaviour aims and character aims. These goals suggest the components of ethical competence.

- *Ethical knowing*

  This involves understanding of the professional role, knowledge of the history and ethical basis of the health professions, the ability to distinguish between personal and professional ethics, understanding of theoretical/philosophical and empirical ethics, and an ability to appreciate the complexity of everyday healthcare practice. Strategies that might promote ethical knowing include the acquisition of knowledge about theoretical and empirical ethics by conventional classroom teaching, online and blended learning and self-directed study. Many journals, texts and online resources offer opportunities to increase the range of knowledge required for ethical practice.

- *Ethical seeing*

  A precondition for professionals acting ethically is that they see or perceive the ethical aspects of a situation. The idea of seeing ethically and of exercising one's moral imagination was illustrated well by Iris Murdoch in *The Sovereignty of Good* (1970, pp. 16-17). She wrote of a mother-in-law, M, and a daughter-in-law, D. Initially, M found D "unpolished and lacking in dignity and refinement … inclined to be pert and familiar, insufficiently, ceremonious, sometimes positively rude, always tiresomely juvenile." However, M looked again, giving careful and just attention to an object that confronted her. In short, M reconsidered D and her vision changed. She concluded that D was "not … vulgar but refreshingly simple, not undignified but spontaneous, not noisy but gay, not tiresomely juvenile but delightfully youthful and so on." Murdoch made the point that M's behaviour had not changed but she had made inner progress: "What M is *ex hypothesi* attempting to do is not just to see D accurately but to see her justly or lovingly." The metaphor of vision and of moral perception is important here, offering a helpful indication of the potential of ethical seeing. Professionals work with many people they find challenging,

and this re-looking can help them to work more constructively and compassionately. Recognising healthcare situations as having an ethical dimension is the first step in enabling students to see ethically. It is not uncommon, for example, to hear students say, "I hadn't thought of this as an ethical issue" when they encounter a clinical issue such as infection control or nutrition. Strategies suggested to develop ethical seeing include engagement with literature and qualitative research to enhance understanding of the human condition and patient experience.

− *Ethical reflecting*
Reflecting effectively enables professionals to respond appropriately to practice situations. Professionals need to reflect on ethical concepts and theories, on their practice and on themselves. Frameworks can be taught that help professionals to think through ethical issues they encounter in practice. In the next section examples of such frameworks are discussed.

− *Ethical doing*
Doing the right thing in the ever-changing and uncertain context of contemporary healthcare practice requires ethical knowledge, perception and reflection. As well, students and professionals learn from experienced and exemplary practitioners. They need also to be aware that they too are role models and the example they set will influence others. Inviting feedback from colleagues and service users and engaging in simulation activities are potentially powerful strategies to promote ethical doing.

− *Ethical being*
Virtue ethics, in the context of healthcare practice, focuses on the professional's character. The development of virtues begins before professional education, through the process of socialisation. There is, moreover, the potential to continue to progress ethically through habituation, the process whereby professionals become virtuous by doing virtuous actions in a self-conscious manner. Developing the virtue of courage, for example, comes from doing courageous things. This approach may be described as an ethics of aspiration; human fallibility means that we can only aspire to ethical perfection.

Moral Distress and Ethical Climate

The discussion relating to ethical competence focuses on the individual practitioner (micro level), but the work context also makes an important contribution to ethical practice. Research exploring the nature of, and relationship between, the *ethical or moral climate* of healthcare organisations and staff *moral distress* suggests how the micro (individual) level might be influenced by the meso (organisational) level.

Moral distress can be understood, for example, as the negative or painful feelings that can result from the inability of nurses and others to do what they think is the right thing in practice. This may be due to organisational constraints, including lack of resources (Corley, 2002). The concept of moral distress has also been challenged. McCarthy and Deady (2008, p. 258), for example, stated that the concept "lacks conceptual clarity" and also that it "perpetuates the dominant or

meta-narratives about the professional identify of nursing." By the latter they mean that the moral distress discourse may set nurses up as victims and that focusing on distressing aspects of ethical decision-making may result in nurses being perceived as powerless.

Corley, Minick, Elswick, and Jacobs (2005) described the "ethical work environment" as characterised by elements of a healthcare organisation that support or prevent professional nursing practice. They referred to McDaniel's conceptualisation of ethical climate, where "ethical values guide behaviour, including setting priorities that provide for the ethical treatment of patients." Instruments have been developed to measure ethical climate (McDaniel, 1997; Olson, 1998). Research examining the correlation between moral distress and ethical climate is particularly relevant to the discussion in this chapter. Pauly and colleagues (2009), for example, demonstrated an inverse correlation between moral distress and ethical climate. That is, the higher the scores on moral climate (a more positive moral climate) the lower the moral distress. This finding underlines the importance of considering issues relating to individuals *and* organisations.

Many reports detailing unethical practice in healthcare (Care Quality Commission, 2011; Health Service Ombudsman, 2011; Patients Association, 2011) are related to dignity and indignity in care. One definition of dignity is suggested in the Royal College of Nursing report, *Defending dignity: Challenges and opportunities for nursing* (2008, p. 8):

> Dignity is concerned with how people feel, think and behave in relation to the worth or value of themselves and others. To treat someone with dignity is to treat them as being of worth, in a way that is respectful of them as valued individuals. In care situations, dignity may be promoted or diminished by the physical environment, the organisational culture, the attitudes and behaviour of nurses and others, and the way in which care activities are carried out. When dignity is present people feel in control, valued, confident, comfortable and able to make decisions for themselves. When dignity is absent, people feel devalued and lacking in control and comfort. They may lack confidence and be unable to make decisions for themselves. They may feel humiliated, embarrassed or ashamed.

Dignity, then, is a key ethical concept in relation to care practices, and it has objective and subjective aspects (Gallagher, 2004). Everyone has human dignity, be they are conscious or unconscious, neonates or older people, dead or alive. It is clear from the previous discussion that, despite many government and professional body initiatives, many patients do not receive the quality of care they should receive. Lapses or failures in care can result in patients feeling devalued, embarrassed or humiliated. Such failures affect the wellbeing of patients and families. Initiatives and innovations are in place and are under development to respond to these failures, and it is to these we turn next.

THE STRATEGY

The components of a strategy to prepare students for ethical practice and to help them eradicate unethical practice engage with the elements of ethical competence. The aims are therefore to promote ethical knowing, seeing, deliberating, acting and being. The following components are designed to deliver an engaging and enriching formal and informal curriculum.

Innovative Approaches to Ethics Teaching

Traditionally, ethics teaching to health professionals was delivered by philosophers and theologians who had little or no experience of healthcare practice. Students would have been introduced to moral theory and to philosophical arguments and doctrines such as "double effect." Although this approach to teaching continues, and needs to do so, it is increasingly acknowledged that it is essential to begin with practice examples. In an introductory ethics class, therefore, rather than beginning with the nuances of Kant's categorical imperative it is likely to be more engaging to ask how and why students would respond to practice situations. Examples could be: "How would you respond if a patient asks you 'Am I dying?,'" "What would you do if you became aware that a colleague was abusing a patient?," "What would you do if you discovered that a fellow student had a serious drug or alcohol problem that was impacting on her work?."

It is helpful to use actual (albeit made anonymous) and detailed examples of situations from practice that illustrate ethical issues, dilemmas, complexity, and the different perspectives of key stakeholders. Students can come to learn that ethical issues in practice are rarely one-off decisions between two people but rather a series of decisions made by a range of people. So, for example, when a patient asks a student professional "Am I dying?" there will be a background and context to learn about. The frameworks in the next section can help students to interrogate practice examples and to ask the right questions.

There is a growing body of work also in relation to more experiential approaches to ethics teaching. At the author's own university (University of Surrey) lecturers have brought together student health professionals and theatre studies students to role-play and learn from their responses to challenging practice situations. In Belgium, nurse academics and philosophers have been working together with student and qualified nurses to simulate a care environment and to stimulate ethical reflection and empathic responses. Qualified nurses assume the role of patients and student professionals act as carers in a residential setting. At the end of the care experience, students and nurses come together to explore what they have learned from the experience (Vanlaere, Timmermann, Stevens, & Gastmans, 2012).

Frameworks for Ethical Deliberation

Frameworks for ethical deliberation also exist which can help students to deliberate or reflect more systematically on the ethical aspects of practice situations. One framework is suggested: the ETHICS framework (Gallagher, 2008) provides a process whereby students consider the steps that contribute to decision-making:

- **E**nquire about the facts of the situation/case
- **T**hink/**T**alk through the options available to those involved
- **H**ear the views of those involved
- **I**dentify relevant principles and other values
- **C**larify the meaning and implications of key values
- **S**elect a course of action and present ethical arguments to support it.

Empirical Ethics and the Humanities

Students may also learn about the promotion of ethical practice from empirical ethics. Many studies are now published in journals such as *Nursing Ethics* and the *Journal of Medical Ethics* that offer insights into patients,' families' and professionals' perspectives. Studies are both qualitative and quantitative, providing an in-depth understanding of lived experience in relation to, for example, end of life care, confidentiality and truth-telling, and statistical correlations relating to such issues as moral distress and the ethical climate of healthcare organisations. There is also a great deal to be gained from the arts and humanities that provide students with enriching perspectives on the human experience, particularly when it is compromised by illness, accident and disease. The journal *Medical Humanities* is a useful resource in this area.

Learning from Reports of Unethical Practice

Earlier in this chapter there was reference to examples of unethical healthcare practices. Critical examination of the reports that detail such practice offers a valuable learning opportunity. How did this practice come about? To what extent did the contributory factors relate to individual, organisational or wider societal factors? And, most importantly, how can we prevent this happening again?

Lecturers have an obligation also to equip students to respond appropriately and safely to unethical practices. In the UK, the Nursing and Midwifery Council (NMC) and the Health Professional Council (HPC) have published guidance regarding *raising and escalating concerns*:
http://www.nmc-uk.org/Documents/RaisingandEscalatingConcerns/Raising-and-escalating-concerns-guidance-A5.pdf
http://www.hpc-uk.org/registrants/raisingconcerns/

It is suggested that lecturers locate resources in their own regions that provide information and support for students who are committed to the development of ethical practice.

Patient and Relative Feedback on Practice

However good we may think we are in our different areas of practice, it is likely that we will have blind-spots and require feedback from trusted colleagues to improve our practice. It can be particularly helpful to request feedback from patients and families regarding our performance. We can ask simply, "How did I do?" in relation to a particular procedure, or ask, "If I were to do that again, how could it have been better for you or your family member?"

Rewards and Publicity for Good Practice

In our consumer-oriented societies we may be quick to complain when things are not as we think they should be. Yet we do not always compliment colleagues or care providers when they do a good job. Identifying good and exemplary practice can make an important contribution to the promotion of ethical practice. The message is: "You too can make a significant difference to the lives of patients, families and colleagues" and "if you do, this will be celebrated and rewarded." Some UK care organisations, for example, give "carer of the month" awards to exemplary practitioners.

CRITICAL REFLECTIONS

The components of a strategy to promote ethical practice have been discussed in this chapter. Ethical practice is multi-faceted, involving micro-, meso- and macro-level factors and a number of areas of competence. Conventional approaches to the evaluation of ethics in relation to the professions have focused on academic performance. Students are increasingly being invited to apply their learning or knowledge of ethics to their practice experience, but there may not be a direct correlation between the A grade student and the ethically sensitive practitioner. As research on moral distress shows us, professionals may know the right thing to do but feel unable to act for internal or external reasons. One of the challenges, therefore, relates to sustainability. How do we ensure that the values and ethical practices that are promoted within professional education endure when students are exposed to the messiness, complexity and busyness of everyday practice?

   Raising awareness of the significance of the moral or ethical climate of organisations is crucial, as is working with professional organisations to take political action when resources are inadequate or when targets compromise patient care. We need to consider how ongoing support and guidance can be made available when students become registered professionals and leave the university. There may be a role here for clinical ethics committees and clinical ethicists who can offer guidance when ethical challenges arise in care. It is important also to consider the overall purpose of professional education and the early socialisation of our student professionals. It is a privilege to engage in work that can make such a significant contribution to the lives of people when they are at their most

vulnerable. The final words are left to the physicist, Albert Einstein (1879-1955) http://www.valuequotes.net/)

One should guard against preaching to young people success in the customary form as the main aim in life. The most important motive for work in school and in life is pleasure in work, pleasure in its result, and the knowledge of the value of the result to the community.

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22. ESTABLISHING RELATIONSHIPS BETWEEN STUDENTS, MENTORS AND SPECIALIST TUTORS IN PRACTICE SETTINGS

THE SETTING

I don't get around to see other people. Now that's probably not very good but I'm getting rather old now and I'm rather set in my ways. I feel what I do works, certainly as far as discipline's concerned which is the main thing… And I'm happy with what I do. [The University Tutor] supplements what I do… to check on what I do as well. On the odd occasions she is here to check on how [the student] is doing… [The University course] is paperwork isn't it? That sounds awful. But I think there's nothing like the practice. I'm not clear what she's doing [with her college work] but there's nothing like the practice, you know what I mean? I'm not a great one for paperwork.

Andrew (quoted above) is school teacher (a mentor) supporting a student teacher who is on a pre-service teacher education course in the UK. He has been mentoring student teachers for a while but still can't see the value of the university contribution to beginning teacher development. In his view, student teachers learn to teach by observing experienced teachers, with a primary focus on establishing and maintaining discipline, with the visiting university-based specialist tutor role relegated to checking that paperwork has been done (Hutchinson, 2008). Many of us who are involved in the tricky business of integrating university practice with the practice of the workplace might recognise this scenario: a university, keen to promote critical reflection, inquiry and reciprocal questioning between the university and the practice setting, in contrast with a mentor practitioner who struggles to see the benefit of this approach. And, at the centre of it all, is a student who needs to respond positively to both sets of requirements in order to achieve professional qualification. While it's true that not all practitioner mentors share this perspective, just as not all university-based tutors endeavour to promote critical reflection, the story draws our attention to the problematic nature of the relationships between the various actors involved in practice-based education, and the need to develop productive relationships between them in order to facilitate student learning.

This chapter looks at some of the challenges that are faced by university and practice-based educators and students as they engage in practice-based education. I use the example of the Open University UK's pre-service course in teacher education, with a focus on the co-creation of curriculum, support and assessment, to identify ways to open up discussion and negotiation between university tutor,

student and practitioner/mentor. The chapter concludes with reflections on the potential of further developing this relationship to enhance student teacher learning.

THE FOCUS: LEARNING IN PRACTICE

Valencia, Martin, Place, and Grossman (2009) wrote of lost opportunities for learning in the education of beginning teachers, reporting that "the shared vision implicitly negotiated within the triad (of student teacher, cooperating teacher [the mentor] and university supervisor) was one of managing the classroom, staying on the given instructional/curriculum track, receiving a good evaluation, and getting along – all of which conspired against learning to teach as a practice of inquiry and experimentation" (p. 319). Why this should be the case has been the subject of much research over many years: discussion between the triad of participants seems to be inhibited and focused on politeness; mentors who are chosen for their ability to teach young people approach mentoring as another teaching activity and disregard preparation programs; and specialist tutors (themselves chosen because of their ability as classroom teachers) are often ill-prepared for their new role. All of this conspires to make open conversation, questioning, critical inquiry and the expression of contradiction difficult. Teacher educators and mentors, it seems, revert to their roles as teachers; their understanding of their roles was largely formed through personal observation, and they find it difficult to link university- and school-based perspectives on practice.

The Open University's Approach

The Open University UK's pre-service program in initial teacher education (the Post Graduate Certificate in Education, PGCE) adopts a systematic and collaborative approach to the development of individualised programs of learning and assessment. Although this approach is not a panacea for all the existing problems in initial teacher education (and Andrew is a good case of how ineffective it can be in some circumstances), it is one that opens up conversation and discussion between mentors, students and specialist tutors.

The Open University in the UK has been involved in initial teacher education since 1992, enabling over 7000 teachers to enter the teaching profession. The program design is highly flexible and has a student-centred approach to learning, curriculum and assessment. A key feature of the course is its flexibility: firstly in terms of the course's responsiveness to *individual needs* through multiple start and finish points, with full-time and part-time options; and secondly in terms its responsiveness to *individual experiential capital*, with varied study and school experience curricula and individualised assessment arrangements, which take prior learning into account.

THE STRATEGY: THE NEEDS ANALYSIS PROCESS

The Open University PGCE program has a modular structure with flexible entry and exit points and enables student teachers to adopt variable study patterns throughout the course on a full- or part-time basis. The PGCE needs analysis process also allows student teachers to adopt individualised routes through the course and use prior experience to gain exemption from part or all of the taught program. Within a total time limit of 36 months student teachers, together with an Open University part-time tutor and school-based mentor, negotiate study patterns that meet their personal circumstances and which enable them, within limits, to satisfy existing personal, domestic and professional commitments.

The OU PGCE course is structured around six thematic strands and three levels. Figure 22.1 is a screenshot of the web-based navigation overview for science student teachers. It has links to the modules, to School Experience Guides for each level (which contain school-based activities linked to the modules) and to Assessment Guides for each level. Each of the course strands is revisited at each level of the course in the form of freestanding modules located on the web. The modules are linked to conventional print course readers and set books and to video and audio material gathered from schools throughout England, Wales and Northern Ireland.
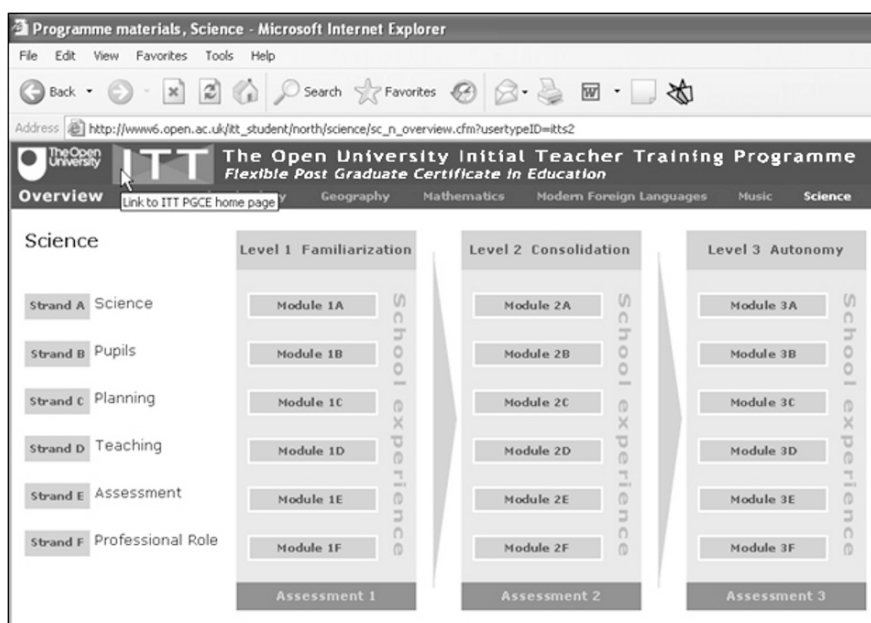

Figure 22.1. The Open University PGCE structure

Key issues in each module are developed by "in-school" activities, written in the School Experience Guide. Each level of the course is linked with a period of school experience:

– Level 1 Familiarisation: 4 weeks in *Secondary School A*, which can be taken flexibly, on a daily basis, where necessary. At the end of this school experience successful students will be able to plan, teach and evaluate a single lesson.
– Level 2 Consolidation: 7 weeks in *Secondary School A* and 1 week in a linked *Primary School*. The final 4 weeks of this experience must be continuous. By the end of this time in school successful students will be able to plan, teach and evaluate a sequence of lessons.
– Level 3 Autonomy: 10 weeks in *Secondary School B*. The final 8 weeks of this experience must be a continuous block of teaching. By the end of this level successful students will be able to plan, teach and evaluate extended sequences of lessons to the full age and attainment group.

The web-based needs analysis process asks student teachers to present evidence that might allow them to omit levels of the course. Student teachers completing the full course are described as "Route 1" students. If they start the course at Level 2, they are referred to as "Route 2" students, and at Level 3, "Route 3" students. Someone who is able to provide evidence of having met the requirements for the course can present for "assessment only" and complete a set of summative assessment tasks in the context of an 8-week placement in school.

CHALLENGES FACED: IMPROVING THE RELATIONSHIP

I argue (Hutchinson, 2008, 2011) that Engeström's theoretical perspective is helpful when thinking about the relationship between the university and practice (2001). He talks about the learning potential that is brought about through an active exploration of contradiction between different sites for learning. By exploring the different perspectives (contradictions) that schools and universities offer, it is possible for those involved to support each other in expanding their understanding.

The relationships between the university and the practice setting can be seen on three levels of communication, collaboration, and the exploration of contradiction. Most good courses in practice-based education facilitate communication between the university and the practice setting, but this is just the first stage on a continuum (Figure 22.2).

Figure 22.2. A dialogic continuum

Partners often see their contributions as totally discrete, and sometimes activities and programs may be planned without knowledge of the learning contributions that are made elsewhere. A second level on the continuum is where the partnership works collaboratively to develop individualised university- and school-based programs with tailored experience in schools and associated assessment. The third level on the continuum entails extensive collaboration that facilitates the active exploration of contradiction between the university and the school as a site for learning.

Although there is evidence from external inspection that the Open University PGCE model is effective in engaging mentors, tutors and student in dialogue and in the construction of individual plans, theoretically grounded research (Hutchinson, 2011) that looks at the learning conversations between mentors, students and tutors shows that learning opportunities are still being missed. Mentors, students and tutors find the active exploration of contradiction between the university and the school to be problematic. This is a weak position that neglects potential learning opportunities. Figure 22.3 illustrates the effect of both strongly and weakly articulated university and school positions on the kind of practice-based program that is developed.
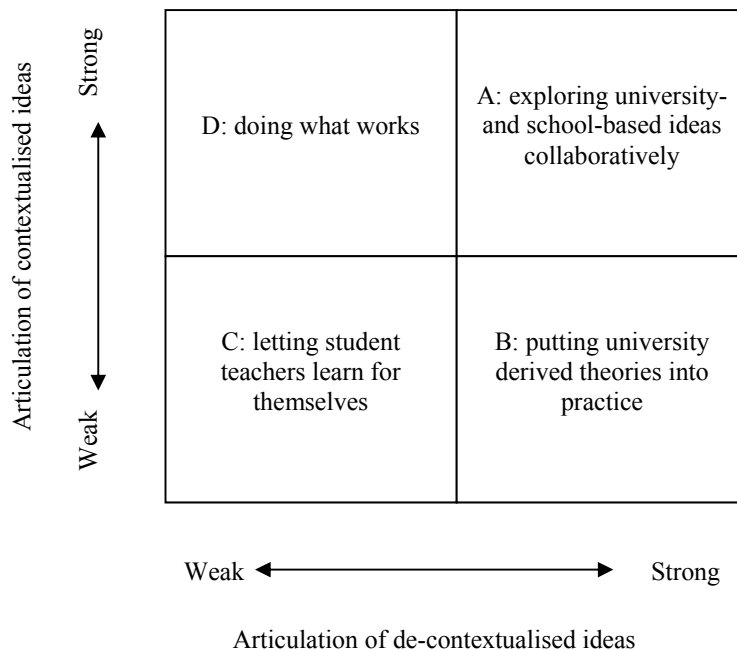

Figure 22.3. Different approaches to learning conversations

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Looking at this model on a quadrant-by-quadrant basis:

– A, the top right-hand corner: *Strong articulation of contextualised knowledge/ strong articulation of decontextualised knowledge.* An expansive, transformative and systemic approach to student-teacher learning explores the contradictions between university- and school-based activity systems, seeing both as learning assets. Both decontextualised university-based and contextualised school-based ideas are strongly represented, and student–mentor– tutor discussion is primarily located in the top right-hand corner of this figure. The potential for expansive learning exists when both decontextualised and contextualised perspectives are made clear and when contradictions between these positions form a "collective journey through the zone of proximal development" (Engeström, 2001, p. 137).
– B, the bottom right-hand corner: *Strong articulation of decontextualised knowledge and weak articulation of contextualised knowledge.* A university-led approach, which might look like a "theory into practice" model of initial teacher education, is where there is strong articulation of decontextualised perspectives and little or no articulation of school-based, contextualised perspectives.
– C, the bottom left-hand corner: *Weak articulation of both contextualised and decontextualised knowledge.* This is an approach to practice-based teacher education in which student teachers are "thrown in at the deep end" and left to teach without support.
– D, the top left-hand corner: *Strong articulation of contextualised knowledge and weak articulation of decontextualised knowledge.* The data from my research (Hutchinson, 2008) show that the top left quadrant of the figure is most predominant. Conversations centre on practice, on specific resources, and show little or no contradiction; other perspectives are rarely present or are made invisible through personal appropriation. On the other hand, contextualised ideas are strongly presented, through a discussion of "what works," either in that school or in other schools, either imagined or real. In other words, with the lack of dissonant perspectives, opportunities for expansive learning opportunities, when mentors, tutors and student teachers discuss teaching, are lost.

CRITICAL REFLECTIONS

Emerging from this research is the richness of the contextualised planning and discussion process when in-school mentors, students and university tutors discuss practice. Resources, ideas, concepts, myths, knowledge and practice from a variety of different contexts are brought together in what one of the participants calls "a mish-mash" of ideas, describing a bricolage (Lévi-Strauss, 1966) process, one where elements are creatively brought together to form a new entity with new meaning but in which the original provenance becomes lost with reuse and re-versioning. This is a potentially weak scenario and one that was identified by Elizabeth Hatton (1988) over 20 years ago.

Hatton's challenge (1988, p. 344) for teacher educators was to make teacher education courses focus less on the application of unreflective technique, to challenge pre-dispositions and to offer real help with recurring dilemmas by addressing, for example, the ethical and practical questions inherent in specific practices. Essentially, she argued that courses in teacher education recognise the problematic transfer of knowledge from one setting to another. Hatton, however, took a *modernist* perspective and appeared to privilege the university over the practice setting; by doing this she failed to take into account the creative potential offered by a postmodern take on this approach. Boisvert (2003), on the other hand, offered a different perspective on "mixing" and "remixing" in popular culture; the drawing together of ideas developed in different contexts and places in ways that are richly creative, adaptive and improvisational. This is a highly creative process as the competences of different communities are brought together in new ways. Significantly, in the mix and remix culture, it is the participants' knowledge of the "sample" or extract in its original form that, when brought together with other "samples" or extracts, provides a collective creative experience: an understanding of provenance is an important creative dimension to this process.

So what could a relationship between mentor, student and tutor look like if alternative perspectives and their provenance were taken as the starting point for student learning, and how could this best be promoted? If it is a priority to pay attention to contradiction and the opening up of expansive learning opportunities that this might bring, how might programs change to promote this new way of working?

Adopting an expansive, transformative and systemic approach to initial teacher education to its full extent would require a considerable reappraisal of approaches to initial teacher education, a rethinking of the roles of those engaged in the teacher education process, including the role of the student teacher and the nature of the partnership between universities and schools. It would entail a different and non-judgemental way of thinking about different types of practice, a willingness to open up practice for the identification of contradiction. In order to do this, school and university practices would need to be recognised by each of the learning partners as legitimate expressions with claims to different areas of competence. This is a process that could, potentially, create a number of difficult issues. Most importantly, it implies equality in the relationship between the mentor, tutor and student teacher as dissonant practice is brought into focus. In fact, however, mentors, students and tutors have different and more or less powerful roles in relation to each other, and the extent to which participants would feel able to expose their thinking to dissonant enquiry in this context remains to be seen. Will the participants be able to establish what Cassidy et al. (2008, p. 224) saw as a requirement for joint educational enquiry, "a deepened sense of trust which facilitates critical debate," or will the current relationship imbalance prove to be an intractable problem?

The Open University's PGCE has taken significant steps to develop a dialogue between the university and practice context, individualising both the university- and school-based curriculum and assessment. But that is only the second stage of a

protracted process. There is much work to do in relation to developing a non-hierarchical view of practice and non-judgemental ways of thinking about practice. It might take some time to develop the skills necessary to approach this process with sensitivity and with a genuine sense of co-learning, but perhaps the application of a new model based on these principles, taken gradually and collaboratively over time, is possible. What seems clear from the literature is that this process is essential if student teachers are to fully engage with the complexities of the school as a site for learning.

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23. NAVIGATING WORKPLACE LEARNING PLACEMENT CHALLENGES

Educating Placement Supervisors

INTRODUCTION

This chapter narrates and critically reflects upon our experience designing and delivering an educational development program for professionals supervising students during periods of workplace learning (WPL). Since the program focuses on educational skills and knowledge rather than profession-specific skills and knowledge, we use the terms *educating clinical supervisors* and *educational development*. We explore the background and context to the development of the program and provide a rationale for the particular educational development approach that was adopted. To inform others working in this space, we describe how we navigated the challenges associated with providing educational development for clinical supervisors.

THE FOCUS

WPL is a distinctive strategy of practice-based education characterised by the situating of students and their learning in real-world contexts of their future profession (Cooper, Orell, & Bowden, 2010). Key stakeholders involved in WPL are students, workforce placement providers (including managers and student supervisors) and education providers (including staff coordinating WPL based in educational institutions). The translocation of students outside the traditional university context presents a number of challenges for all stakeholders, related to curricula, logistics, equity, quality, funding, etc. (see Figure 23.1).

This chapter reports a case example in which a collaborative partnership identified and educated supervisors to become skilled in providing WPL placements, in particular, for their role in supporting student learning and conducting assessment. Although there is often an assumption that professionals are able to teach students because they are capable practitioners, our experience with WPL reveals that this assumption needs to be questioned.

As the number of university programs and the number of students in the health professions has expanded in recent decades there has been a steady increase in demand for clinical education placements (Health Workforce Australia, 2010). As a consequence there have been increased expectations that teaching one's practice

who take on a particular clinical education role. Thus, whereas clinical teaching was once the domain of people who were particularly interested in teaching, more and more professionals are being given responsibility for teaching when it might not be an area of their interest or capability. The outcome is that professionals can find themselves in situations where they feel ill-qualified for their role as clinical supervisors. The project reported here gives insight into the educational development of workplace supervisors using a method meaningful to their role.

Figure 23.1. The challenges of workplace learning

–   Integrating WPL into curricula in the context of traditional university structures
–   Ensuring sufficient placements that meet the learning objectives relative to the student numbers
–   Ensuring equity of access to quality workplace experiences
–   Identifying and ensuring a minimum standard of education in the workplace
–   Funding the costs to stakeholders of WPL
–   Adequately preparing students for diverse and complex learning experiences
–   Coordinating and sustaining partnerships between several stakeholders
–   Meeting competing priorities of providing business services and educating students
–   Identifying and providing educational development for supervisors to enable them to be skilled in providing WPL placements
–   Ensuring adequate space and resources for students in the workplace
–   Providing support services for students, e.g. accommodation
–   Having sufficient empirical research to guide optimal practice of WPL
–   Effectively moderating assessment
–   Brokering expansion into new contexts and with non-traditional providers

Providing educational development programs for clinical supervisors is not a new initiative: we are not the first or the only group to be interested or engaged in this activity. In their support for clinical supervisors, universities have often conducted workshops that introduce supervisors to concepts and strategies for promoting learning and evaluating students on placement. Many of these approaches are informal and based around requirements of the students' curriculum. Some programs have been more formally developed and even partially commercialised (for example, "Teaching on the Run," operating through the University of Western Australia, focused initially on doctors and their role in clinical teaching (http://www.meddent.uwa.edu.au/teaching/on-the-run). However, comparatively little scholarship has focused on identifying, investigating and promoting approaches to education development for clinical supervisors. Instead there is a tendency to draw upon educational theory and practice developed for and within academic settings and applying this knowledge to the clinical setting.

THE SETTING

The setting for this case is health professional education. WPL has a long-established tradition in health professional education, where it is also known as clinical education, placements, practicums or fieldwork. In this chapter we refer to clinical education to reflect this context. The management of clinical education is a collaborative process between the education provider and the health service. Students are placed in health service settings where they have the opportunity to expand and apply their evolving professional knowledge and skills while working with clients accessing health care.

Students undertaking clinical education are typically supervised by practising health professionals who become involved in supervising and educating students on placements as part of their professional and work role. Clinical supervisors often have limited formal training in education. They may be engaged in clinical education at different levels, such as coordination of placements, direct supervision of students, or taking an assessment or part-supervision role in partnership with other practitioners.

This case study is an example of collaboration in Australia between Barwon Health (a health service located on the south-west coast of Victoria), Charles Sturt University and Deakin University to address the capacity for clinical education. The case is an example of positive synergy between education providers and clinical practice settings in providing educational development for clinical supervisors. The education providers applied their knowledge of clinical education and skills required by supervisors to meet their students' needs; the health service providers applied their understanding of needs and demands on their staff engaged in providing and supporting clinical education.

THE STRATEGY

The educational development program targeted Barwon Health staff who provided both professional services to patients and supervision to entry-level health professional students. Some staff also had a role supervising practitioners who were entry-level clinical and assistant staff. The staff taking on these educational and supervision roles were designated as Grade 2 staff under the Victorian Health Professionals Award (Fair Work Australia, 2003). The role of these staff was to take direct responsibility for patient care and to provide supervision and delegation of aspects of care to enable students to achieve their learning objectives.

These staff also collected evidence for assessment and provided feedback to the students, independently or with support from senior staff. The project also included educational development for experienced clinicians who were expected to transition into Grade 2 roles in the near future (Grade 1 clinicians under the Victorian Health Professional Award).

A distinctive feature of the program was the engagement of clinical staff in defining and articulating the tasks of the clinical supervisors and producing

descriptions of tasks that were fully contextualised to the workplace setting. The educational development program consisted of three components:

1. Identification of the educational development needs of clinical supervisors by defining key tasks associated with the role
2. Evaluation of self-efficacy to perform these tasks, using a Clinical Education Supervisor Self-Efficacy Tool (CESSET)
3. Development and delivery of a targeted training package(s).

The process of developing the program was grounded in previous work undertaken by Barwon Health, which sought to identify the competencies (tasks) required by Grade 2 clinicians to fulfil their role in the organisation. This process involved reviews of the literature and position descriptions, a task audit of Grade 2 clinicians, and refinement of the list of competencies by managers of Allied Health. This work identified 18 tasks common to Grade 2 clinicians across eight allied health disciplines.

One of these 18 tasks was directly related to clinical supervision. Barwon Health chose this task, "*facilitate and develop the clinical and professional expertise of students in your clinical area*" as the focus of the educational training program for the clinical supervisors. This choice arose from concerns regarding the preparation of Grade 2 clinicians to perform student supervision during clinical education, the growing demand for student clinical placements and the recognition that the retention of allied health clinicians at this level was a key element in the organisation's capacity to ensure high-quality clinical placements.

Further exploration of the student supervision task identified 11 learning objectives related to clinical supervision, and training commenced to address these learning objectives. The impact of this initial training attempt on the participants was evaluated by measuring changes in their self-efficacy as clinical supervisors. The evaluation revealed that training in this task enhanced self-efficacy and positively skewed scores of the whole group towards high self-efficacy. Moreover, high self-efficacy following training was associated with positive organisational outcomes including job satisfaction, organisational commitment and intention to remain working in their health facilities, particularly in clinicians who had low self-efficacy prior to training.

Once the training program commenced and was repeated over successive years, both the regional health service and the educational partners refined it in response to critical review and reflection. Refinements fell into three broad areas: (a) conceptual analysis of what it means to undertake WPL/clinical supervision; (b) cognitive testing and development of the self-efficacy tool; and (c) enhancing the training program.

Conceptual Analysis of the Task of Doing Clinical Supervision

An integral component of the program development has been the use of self-efficacy as a guiding concept to evaluate the need for and response to training. Clinical supervision self-efficacy, a concept developed for the program, refers to an

individual's judgment of his or her capability to perform tasks related to the supervision of students in the clinical setting.

For supervision self-efficacy to be predictive of capability, it must explore factors that have high impact in the domain of supervision in the clinical placement setting and must assess the multifaceted ways in which self-efficacy operates within this activity domain. Conceptual analysis of the original task, "To facilitate and develop the clinical and professional expertise of students in your clinical area" identified five domains of functioning related to clinical supervision (Table 23.1).

Table 23.1. Domains of function related to clinical supervision

Domain	Description
1. Facilitating learning in the clinical setting	The provision of teaching and learning experiences in the clinical setting necessary for students to successfully meet professional practice standards
2. Planning education	The educational planning process that facilitates student attainment of the clinical placement's learning goals
3. Conducting performance evaluation and feedback	The interactions with students in guiding and developing their professional practice to established levels of capability
4. Managing marginal performance	The activities necessary to mitigate the risk of a student failing to meet expectations for the clinical placement
5. Managing roles and relationships on placement	The interpersonal behaviours, maintenance of positive, effective relationships and use of coping strategies related to successful clinical supervision

Further exploration and conceptual testing articulated 27 tasks set at the level of the novice clinical supervisor, across the five domains of clinical supervision (Table 23.2).

Development of the Self-Efficacy Tool

The CESSET was developed to facilitate reflection by professionals on their own capabilities, identify their learning needs, streamline educational development planning and enable tracking of changes in self-efficacy as the capabilities evolved. The information collected by CESSET was intended to be used by the organisation at a strategic planning level and for day-to-day and medium-term educational development planning by professionals with their supervising senior staff.

Table 23.2. Tasks for clinical supervisors

Domain	Tasks
Facilitating learning in the clinical setting	• provide a range of experiences so students can effectively apply their theoretical knowledge to clinical practice • help students to acquire the skills required for professional practice in your clinical setting • effectively utilise learning opportunities to support or extend students appropriately, as their capabilities develop • adapt your teaching strategies to suit different approaches to learning, in a variety of learning contexts • engage students in critical dialogue about professional practice, where they can challenge, question, refute and reflect • effectively manage the competing demands of your responsibilities to your patients, students and colleagues
Planning education	• develop your own approach to clinical education grounded in educational theory • develop a learning plan that is manageable, realistic and appropriate for the student in your clinical setting • formulate learning goals and a variety of strategies for achieving skill acquisition • develop educational resources • conduct educational activities to achieve the learning goals for the clinical placement • negotiate with staff to develop a timetable and the space and equipment required for the clinical placement
Conducting performance evaluation and feedback	• effectively guide and support students' patient care performance, including dealing with mistakes • incorporate assessment into learning activities to help students recognise their progress and guide ongoing learning • evaluate students' performance using standardised objective criteria or assessment tools • make recommendations with respect to how students have met the objectives of the clinical placement • provide consistently clear and constructive feedback and have a method for checking students' understanding • adapt your methods for giving feedback to suit different preferences and learning styles

Table 23.2. (continued)

Managing marginal performance	• identify issues regarding students, their supervision or the workplace that might put students at risk of failing • use effective strategies with students, university staff and managers, to address issues contributing to marginal performance • conclude student feedback sessions with an agreed problem list and plan of action to improve performance
Managing roles and relationships on placement	• develop positive and effective relationships with students, staff, managers, clinical teams and university staff • identify and clearly articulate to your student the boundaries of your respective roles and relationship • effectively manage your emotions and the emotions of others in interactions, even when tensions arise • effectively manage students who display challenging behaviours • approach colleagues to discuss problems and develop strategies to resolve issues in the clinical placement • seek support from senior staff to help resolve challenging situations in the clinical placement

Bandura (1986) defined self-efficacy as "people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). A self-efficacy judgment reflects an individual's perceptions about his/her capability to produce a designated performance in a context with specific situational demands. Unlike a competency assessment, which is a fixed point, context free, outcome-based measure, self-efficacy is a judgment of perceived prospective capability.

The concept of self-efficacy was applied in this project because we hypothesised that it would provide insight into the effectiveness of training interventions to produce practice change. Enhancing self-efficacy through training has been shown to mediate the adoption of new behaviours across diverse aspects of human functioning, including computer use, salary negotiation and communication with cancer patients (Compeau & Higgins, 1995; Parle, Maguire, & Heaven, 1997; Stevens, Bavetta, & Gist, 1993). Individuals with high self-efficacy perceive themselves as more confident or assured of successfully performing a specific task, and perceive themselves as able to accomplish more difficult tasks with greater situational demands; or they may judge themselves capable of operating with less support or assistance than those with a low level of self-efficacy (Bandura, 2006). The use of self-efficacy scales as tools for developing skills has been questioned (Eva & Regehr, 2005) because of the demonstrated inability of individuals to accurately judge their performance and the malleability of self-efficacy. It appears, however, that when it comes to adopting new behaviours, the skills and abilities that individuals possess (competencies) matter less than what individuals believe they can do (self-efficacy) with these components (Bandura, 1997).

The CESSET consisted of the list of tasks for clinical supervisors, with space provided for individuals to rate their self-efficacy to perform each specific task (see Table 23.3 for an excerpt from the CESSET). Following the initial training program, a review by clinical staff revealed that although the tool was useful as a research measure, it was limited with regard to how clinicians could use it in the workplace setting. Clinicians' concerns focused primarily on their difficulty in conceptualising their confidence as a number on the rating scale, resulting in a lack of salient information to effectively guide their educational development planning and an inability to definitively identify clinicians requiring training. The CESSET rating scale for level of self-efficacy was refined into an eight-point Likert scale, with descriptors as follows:

0 – Know nothing about this
1 – Know about this, not sure where to start
2 – I want to be shown or helped
3 – Willing to try, but I want feedback or support
4 – I am confident to try this on my own
5 – I can do this myself
6 – I can do this well
7 – I can teach someone else how to do this

Grade 2 and experienced Grade 1 clinicians in the organisation were identified by managers and were then invited to complete the CESSET. Completed CESSETs were reviewed and clinicians were identified for training if they scored their self-efficacy as low for any tasks in a specific domain. Once the targeted professionals had completed the CESSET, their scores were interpreted to guide training needs. Descriptors for the scale enabled it to:

1. Definitively identify an individual's score as low or high:
   a. Individuals with low scores (0-3) are identified as requiring some form of external input or training.
   b. Those with high scores (4-7) are independent in their learning at a novice level and can be identified for more advanced training.

2. Inform qualitatively the type of educational development activity required.
   a. A score of 2 indicates a desire to have the task modelled, whereas a score of 3 indicates a willingness to attempt the task with support and feedback.
   b. Those with scores of 6 or 7 for most tasks are identified as potential providers of educational development for the organisation and appropriate for further development as supervisors.

Table 23.3. Excerpt from CESSET for Domain 1

SELF-EFFICACY	
Rate your level of confidence to perform each of the tasks below by recording a number from 0 – 7 using the scale.	
Task: Facilitate learning in the clinical environment	**Level**
Provide a range of experiences so students can effectively apply their theoretical knowledge to clinical practice.	
Help students to acquire the skills required for professional practice in your clinical setting.	
Utilise learning opportunities effectively to support or extend students, as their capabilities develop.	
Adapt your teaching strategies to support different approaches to learning, in a variety of learning settings.	
Actively encourage students to engage in critical dialogue about professional practice where they can question, reflect and discuss issues in a supportive environment.	
Effectively manage the competing demands of your responsibilities to your patients, students and colleagues.	

The CESSET has been designed for use in the context of supervisory relationships as a tool to guide planning of a program for supervisors' educational development. The CESSET is particularly pertinent to novice clinicians for two reasons: (a) there is a tendency for individuals who are inexperienced in performing a specific task to over-estimate their capabilities and judge their self-efficacy as high; (b) the risks associated with incompetent performance in the health setting may be high. The judgment of one's self-efficacy using the CESSET is the first step in developing an educational development plan and is not intended as a summative assessment of an individual's performance.

Training for Clinical Education Supervisors

Training consisted of half-day workshops, with each workshop specifically tailored to a single domain. Individuals were invited to attend workshops that matched their identified learning needs, and could attend up to five workshops. The teaching strategy used in the workshops was to engage participants in interactive activities directly related to enhancing their capabilities to provide clinical supervision. Participants were asked to evaluate the sessions and to specify how they thought their supervision practices would change as a result of workshop participation.

Changes in self-efficacy were explored 2 months after completion of training, using a repeat completion of the CESSET. The second measure of self-efficacy

enabled evaluation of the effect of the training on self-efficacy and guided ongoing planning for the educational development of individual participants. Analysis explored the distribution of low and high self-efficacy scores before and after training and the size and direction of change in self-efficacy scores. Qualitative analysis of post-training self-efficacy scores identified the ongoing learning needs of clinicians and this information was reported back to program managers to inform educational development planning, including supervised practice for clinical supervisors with feedback and support.

This project is ongoing but the key findings from the evaluation so far indicate that the CESSET can identify clinicians with learning needs related to clinical supervision, who may benefit from training. For the majority of clinicians, workshop training was effective in enhancing their self-efficacy. However, a small group of clinicians showed persistently low self-efficacy, despite attending training in the relevant domain/s. Analysis of this group's characteristics revealed that these clinicians were true novices; they had not yet supervised any students on clinical placement. Training had enhanced their self-efficacy to a score of 3 ("Willing to try but want feedback or support"), but without active experience of performing these tasks in the workplace the novice clinicians were not yet confident to attempt this task on their own. This finding underpins the key role of WPL (with guided mastery and feedback) – for the supervisors in this case rather than students – in the adoption of new capabilities and behaviours. More work is required to explore how best to transfer the clinicians' knowledge gained from workshop training into enacting new behaviours in the workplace.

CHALLENGES FACED

Throughout the implementation of this project a number of challenges have emerged. These challenges arose from the terminology related to clinical education and supervision, using the self-efficacy framework, understanding the effects of training, and the logistics of engaging clinicians in an ongoing educational developmental program.

The language used in the CESSET was considered carefully for two reasons: (a) The tool is a domain-specific self-efficacy scale. This theoretical construct relies on task descriptions that are tailored to a specific domain of functioning; (b) The language needs to be transferable to different disciplines within allied health. Issues surrounding terminology included difficulty finding common terms for the task descriptions that had meaning for the professionals involved. There was no single, agreed set of terms for training activities. Even within a single organisation, the words "education" and "supervision" needed to be interpreted in their broadest sense and portrayed as inclusive of discipline-specific variations across allied health.

Significant discussion and effort were required to shift from conceptualising tasks using competency frameworks with which clinicians were very familiar to a self-efficacy construct. The main challenge arose from the different method of describing a task required for a self-efficacy scale. Whereas competencies are

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described in parts – knowledge, skills and attitudes, self-efficacy scales need descriptions of specific tasks with sufficient information to enable individuals to conceptualise the performance as a whole, its level of difficulty and the situational demands entailed. The need to balance the specificity of task descriptions with the number of tasks to be rated has remained a challenge throughout the program.

Further challenges were presented in interpreting the self-efficacy scores. As already discussed, clinicians experienced difficulty using the initial 0–10 rating scale and it was later changed to an eight-point scale with descriptors at each level. The CESSET permits the evaluation of training through its effect on self-efficacy. Yet although high self-efficacy predicts the adoption of new tasks and behaviours in the workplace, the challenge remains of quantifying this directly and exploring how best to influence workplace performance.

The logistical challenges involved in engaging clinicians in a training program have centred mostly around clinicians participating in training to meet all their learning needs, access to subsequent experiences of clinical supervision after training, and staff change/turnover. The provision of training on an annual basis has allowed these challenges to be addressed.

CRITICAL REFLECTIONS

We have concluded that establishing, developing and implementing the program as an approach for educating clinical supervisors for their role had positive impacts for the staff involved and for the organisation. The key elements that were distinctive about this program, compared to more traditional methods of educational development, were (a) the identification and definition of key tasks associated with clinical supervision by the organisation, and (b) the program's use of the concept of self-efficacy as a framework for guiding the focus of the training.

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24. COLLABORATIVE PRACTICE AND INTERPROFESSIONAL EDUCATION AND WORKPLACE LEARNING

One of the biggest challenges faced by workplace educators is the design and implementation of training that primarily requires an attitudinal change or a change in perspective. Currently in the health sector internationally there has been high-level policy impetus given to interprofessional collaboration, yet health professions primarily educate their new practitioners in silos. The most influential consideration of the role and importance of interprofessional education (IPE) appears in reports published by the World Health Organization (WHO). In its latest report, the WHO considered a range of studies published in the literature (including a systematic review) and carried out extensive consultation culminating in the Framework for Action on Interprofessional Education and Collaborative Practice launched in 2010 (WHO, 2010). This framework underscores the imperative for increased collaborative healthcare practice directed at strengthening health systems and health outcomes. It also introduces the concept of "collaborative practice-ready" health care professionals—individuals whose training is made possible by the development and implementation of effective IPE programs.

IPE enables learners to work in teams or groups to explore similarities and differences within and across professions. Successful interprofessional teams understand where professional boundaries intersect, have respect for all members of the health workforce, disrupt hierarchies, and activate all members of the healthcare team. Health is of course not the only profession where interprofessional understanding is important (consider a construction site, for example) and we hope our experience can be useful for those in sectors other than health.

This chapter describes an initiative to pilot an interprofessional education experience for new graduates from eight health professions entering the workforce at a large metropolitan hospital in New Zealand. A group of hospital-based educators in Christchurch decided that they wanted to take up the challenge to enhance the interprofessional understanding of their new graduates and at the same time develop and enhance their own cross-professional links and understanding of each other's professions. When interprofessional understanding is the primary goal the content needs to be appropriate to that industry but it is the vehicle for the learning.

THE STRATEGY

A group of educators from a range of health disciplines (all members of a local Interprofessional Supervisors Group) decided to take up the challenge and explore a teaching strategy designed to encourage interprofessional understanding among our new graduate workforce, but also to build and develop our own understanding and capability as a group of supervisors committed to the principles of IPE and collaborative practice, and we chose simulation as our teaching strategy. In this chapter we tell the story of that experience.

The design of the simulation drew on understandings gained from the literature and from experience of similar initiatives in overseas clinical settings. As Hammick, Freeth, Koppel, Reeves, and Barr (2007) pointed out in their review of the IPE literature, the wide range of IPE interventions showcases a variety of educational methods, professional groups and evaluation methods. Most reports provide descriptive and evaluative information rather than robust research-based evidence of the effectiveness of IPE. Some studies report mixed results for the impact of IPE on improved practice (see e.g., Thistlethwaite & Nesbit, 2007). However, emerging evidence indicates the positive benefits of IPE for learner satisfaction, increased knowledge and skills about collaborative practice, and changed perceptions of others in the team (Hammick et al., 2007). Key evidence-based components of IPE used to inform our IPE project were:

1. Development of a shared vision of IPE and how it can be implemented in the organisation;
2. Provision of an authentic, realistic IPE experience linked to the needs of all professionals involved in the learning;
3. Use of expert staff, drawn from a range of professional backgrounds, to facilitate IPE activities;
4. Identification of clear learning outcomes related to content and process;
5. Identification of the resources (rooms, equipment, teachers) necessary for the implementation and delivery of IPE.

Our pilot drew on the work of Freeth and Nicol (1998) and Ker, Mole, and Bradley (2008). Both sets of practitioners used a simulated ward environment set in a clinical skills centre catering for patients with common medical conditions.

Goals, Participants and Project Coordination

The IPE pilot required the new graduates who participated in it to work together through various clinical scenarios in a simulated ward environment. Each scenario was designed to enable participants to:

− work collaboratively as an interprofessional (IP) team;
− integrate their clinical skills in a reality-based setting;
− jointly prioritise the care of simulated patients;
− socialise interprofessionally early in their careers;

− compile collaborative patient records.

All participants were new graduates or students in their final placement from the eight represented professional groups.

Simulation Scenarios

An acute orthopaedic/eldercare admitting ward was simulated in the Clinical Skills Unit of the hospital where the IPE activity was centred. The simulated ward had five bed bays and an office/nurses' station. Supporting supervisors could be visited in a simulated allied health office area adjoining the ward. All relevant papers and documents normally available on the ward were present, and participants had access to a realistic range of equipment. The ward also had in place a whiteboard for summarising case information.

The simulation was conducted over a half day and involved three phases: briefing (60 minutes), simulation (90 minutes), debriefing (60 minutes). All participants potentially experienced all five cases, depending on how they managed the caseload as a team. Five professional representatives from each discipline wrote one scenario, sought input and feedback about scenario content from experienced practitioners within the professions represented in the project, and coordinated project activity across those professions.

The five simulated patients and their *whanau*, or family support persons, were played by a combination of professional actors and interprofessional volunteers from medicine, nursing and allied health. A local charge nurse led the nursing team on the ward and an orderly delivered new arrivals to the ward once the scenarios commenced. Supervisors from each profession were available on site to support participants and were also available for consultation by any participant who needed additional information or clarification about aspects of the scenarios.

Simulation Procedure

We (the project development team) briefed the 11 participants. We outlined the objectives of the project, emphasising that it was a pilot IPE activity and that we would be looking for honest feedback and suggestions for improvement. The project facilitator explained the nature of the simulation, how it would run, and the need to suspend reality to some extent. Participants then engaged in a small group exercise that involved turning and repositioning a "simulated patient." The purpose of the exercise was to emphasise the importance of teamwork and collaboration. On arrival at the hospital's Clinical Skills Unit the participants were offered a *karakia* by the Māori advisor. (A karakia is a prayer or blessing and was an important cultural consideration, as one of the scenarios was a deceased Māori patient.) They were then taken to the simulated ward set up in the skills unit. Here they were met by the "charge nurse" (a senior nurse took this role) on duty, with whom they conducted an interprofessional ward handover. The participants team members were asked to familiarise themselves with their patients and to manage

any issues that presented. No leader for the newly formed clinical team was appointed. After one hour, the simulation was paused, and participants were given an opportunity to ask questions and seek guidance. The simulation was halted after a further 30 minutes, at which point a team debriefing was held. This involved both participants and actors, and it focused on the care delivered and the lessons learned.

Evaluation

To evaluate the usefulness of the IPE we prepared an impact evaluation framework based on a tool developed by Sheffield University's Centre for Inquiry-based Learning in the Arts and Sciences (CILASS, 2010).

Data Collection and Analysis

1. A pre/post questionnaire for participants was designed to identify changes in their understanding of the roles of members of the interprofessional team (the questions asked are set down in the findings section below).
2. A debriefing session during which the participants and actors described and discussed their experience of the simulation was facilitated by a project member, who also took notes on what was said. A neutral administrator took notes and collated both sets of data also incorporating commentary sent in after the debriefing from participants or actors who needed to leave early.
3. A second debriefing session, this time for the project team, was conducted immediately after the participant debriefing by a project-independent member of the hospital's Interprofessional Supervisors Group.
4. A reflective evaluation of the Clinical Skills Unit's resourcing of the project and the realism of the simulated ward was prepared by the Skills Unit coordinator.
5. A report was provided by an external advisor from the hospital's Training and Development Unit, who acted as an independent observer during the simulation.

The data from the questionnaire and the debriefing notes were collated by the project coordinator and sent to all the supervisors for checking. The comments from all three debriefings were organised into themes and again circulated.

Overview of the Results
The findings were synthesised under three categories: the participant questionnaire data, the oral debriefings, and the observer reports.

1. Pre- and Post-simulation Questionnaires

All participants (11) completed the pre and post questionnaires. The first question asked, "How well do you know the roles and responsibilities of each of the following health professions?" The question required participants to consider each of the eight professions included in the simulation and then to indicate, using a five-point Likert scale, their level of familiarity with each of those professions. We

found no change between pre- and post-simulation knowledge among the participants except for those representing nursing. Both nurses reported an increased understanding of the roles of others, specifically pharmacists, doctors, physiotherapists and speech-language therapists. One nurse reported an increased understanding of her own role. She said the responsibilities of being a registered nurse "suddenly hit home" to her.

Question 2 asked participants to self-report their learning about interprofessional teamwork by responding to a series of items and stating their level of agreement with each, again on a five-point Likert scale. The gains reported were slight for the majority of participants. On the basis of these responses we did not appear to make a major contribution to interprofessional understanding, which was disappointing.

Responses to Question 3 were more positive. We invited open comments and feedback from participants, who, among them, provided a wide range of comments and experiences with regard to the simulation, as evidenced by these examples:

- Very useful … good hands-on experience.
- The experience was valuable, but I mainly learnt more about my own role rather than that of others.
- I found the scenarios overwhelming.
- Too involved in what I was doing; not enough time to get through what was needed to be done myself before being able to talk to others about the issues. Need to learn the role of an MDT [multidisciplinary team] before going into the scenario.

These results suggested that we had heightened awareness of patient-related and interprofessional issues and that we had been successful in constructing a realistic simulated work environment. What we had not done was increase the participants' interprofessional understanding or developed their skills in collaborative practice. This may be due to the fact that the participants were early in their careers and therefore had not yet developed their professional identity, so they focused on their own roles and did not take full advantage of the IPE experience.

2. Data from Participant Debriefings

The information gained from the oral debriefing indicated that, overall, the simulation was very realistic for participants. It was, perhaps, *too* realistic, in that participants appeared to be forced into their "silos." The participants reported a sense of feeling overwhelmed by real-life cases. This might be due to their being new graduates who have yet to build up their library of patient experiences. Real-life patients could be viewed as more complex purely because of this. The number of cases contributed to the reality but also the intensity of the experience, and both the learners and those observing the IPE suggested that fewer and less complex cases would be preferable in future simulations. Feedback also provided useful recommendations for enhancing briefing and debriefing of both participants and actors. We are happy to make these available on request.

3. Independent Observations and Comments

The independent observer reported that all participants appeared to take the experience seriously and that they remained within their professional roles throughout. The observers from the Clinical Skills Unit staff agreed that the entire process of designing and implementing the simulation and determining the content of the scenarios had provided an excellent opportunity for collaboration as well as experience of how powerful a simulated setting can be.

CHALLENGES FACED

The project required coordination support from the Medical Education and Training Unit and the use of facilities from the Clinical Skills Unit of the large metropolitan hospital in which the pilot took place, and support and contribution from personnel from participating disciplines. This had resource implications and physical and logistic challenges, not the least of which was coordinating meetings and timetabling the simulation. In a workplace environment the challenges of staff release (participant and supervisor) are considerable, and cover in the workplace for both supervisors and participants is costly.

The inevitable cross-discipline miscommunication and dialogue on the management of differences that emerged from the range of professional orientations, values and perspectives meant that planning was time-consuming and lengthy, particularly the preparation of five cases to include something of "interest" to each professional. However, feedback indicated this was a positive experience for those involved and the supervisors who designed these cases learned about the other professions on the way. It was very much a capacity-building exercise.

Disappointingly, from the learner feedback we learned that we did not do as much to enhance their interprofessional understanding as we had hoped. Despite this, we felt the exercise was a success as we did enhance their awareness of the issues that surround this ideal of "collaborative practice" and increased their awareness of the strengths and challenges of interprofessional practice.

CRITICAL REFLECTIONS

Although the evaluation data from the participants and actors involved in the simulation indicated a range (from positive to somewhat negative) of comments on its usefulness as a learning experience, the data from the observers and the project team indicate that the approach piloted has merit for development as an ongoing means of aiding the learning of interprofessional healthcare teams. Limitations obviously need to be addressed. A key message in this regard was to "keep it simple," especially with respect to designing the case studies for the simulation. The previous simulations on which we modelled this learning event were held for two professional groups only, and this is clearly a simpler undertaking (Freeth & Nicol, 1998; Ker et al., 2008). However, keeping it simple could be a difficult

requirement to accommodate, given that cases need to be interesting and relevant to the range of participants.

Our experience reinforced the appropriateness of our initial guiding principles (listed above) and in particular the importance of clear learning outcomes in relation to the process of the simulation and insuring that they are understood by all parties. (This finding reinforces those of Freeth & Nicol, 1998, Davidson, Smith, Dodd, Smith, & O'Loughlan, 2008, and Ker et al., 2008).

Overall, we consider that the trial was successful as it provided a unique teaching and learning experience for the workplace educator team. This team reported that the process of planning the IPE experience led to us working in a more interprofessional manner and strengthened our community of practice. It was a major undertaking that ran on the leadership, initiative, and the goodwill of a group of clinical supervisors committed to developing clinical teaching and supervision in their workplace. The group has gained confidence and ideas for the future, and developed skills and trust as an interprofessional teaching team.

All people involved in this project either implicitly or explicitly recommended that this experience (or a less resource-intensive version of the simulation) be part of orientation for all new graduates. The undergraduate nursing program associated with the hospital that hosted the simulation is discussing the possibility of conducting similar scenarios for students in their last undergraduate year, as they could see, from the experience and commentary of the two nursing participants, the effectiveness of the simulation. The participants might have found the experience more beneficial if they had been provided with opportunities to meet each other and given more information regarding the focus of the project. This could include a questionnaire to assess their understanding of IPE, such as the Readiness Interprofessional Learning Scale (RIPLS; Parsell & Bligh, 1999). Despite being briefed immediately before the IPE that they were not being assessed, the participants found the experience was reminiscent of practical examinations and were very conscious of their own performance, inhibiting their ability to interact in an interprofessional manner.

Finally, this project raises a key question common to simulation. Why use simulation if a similar experience is available in the workplace? A collaboration between Curtin University and the Royal Perth hospital offers an alternative approach to the use of simulation. Here, six beds within a 26-bed general medical ward provided the setting for three consecutive 2-week placements for health science students from six professional groups representative of the participant groups in the simulation reported here (Curtin University, 2010). This is an alternative worthy of consideration and one that raises the usual arguments for and against simulation versus authentic clinical experience. In the Curtin report a number of recommendations were made which are not dissimilar from those noted in the simulation pilot; for example, more training for staff and increased focus on interprofessional rather than profession-specific tasks. The same demons appear to emerge regardless of setting!

In this pilot process newcomers learned not just about the practice of the profession to which they belonged but what it means to be a member of the wider

health professional community, through observation of and interaction with fellow participants and supervisors as established members of a wide range of disciplines providing patient care. Finally, we note that all workplaces contain a mix of disciplines and mix of professional cultures. Interprofessional education, which seeks to cross boundaries and enhance interprofessional understanding, is one way the work teams (or, if you prefer, communities of practice) can be strengthened while at the same time encouraging understanding, shared perspectives, enhanced communication and, where appropriate, boundary crossing between practice communities.

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25. DEVELOPING INDIGENOUS PERSPECTIVES IN PRACTICE-BASED EDUCATION

The term "exemplary practice" may be contested since decisions regarding authority to judge the exemplary nature of practice, and the basis on which such judgements are made, are open to question. Its use alongside the phrase 'indigenous perspectives' becomes even more challenging, especially when the narrative voices are outside the indigenous group of interest. Cognisant of these issues, our intention in this chapter is to describe an evolving set of exemplary practices in developing indigenous perspectives in a practice-based, teacher education course.

We provide the context and processes of our work and use our individual voices to provide critical reflection of the project from multiple perspectives. In doing so, we argue that it is the polyphonic nature of the different voices, and their continuities and discontinuities, that provide both the challenges and opportunities to work towards realising exemplary practice, ensuring that it is flexible and responsive to the needs of all stakeholders.

THE CONTEXT

The context for this project is the Ontario School of Education on the Canadian campus of an Australian University, Charles Sturt University. Here the students already hold degree qualifications and are participating in a 9-month course to obtain primary teaching qualifications. The staff profile, consisting of both Canadian and Australian personnel, is constantly changing. Canadian staff members normally work on a 2-year secondment; Australian staff may be there from 6 to 18 months. An exception is the Head of School who is on a longer contract. The length of the course and the changing staff profile present complexities in moulding a cohesive unit. Different employment and geographical traditions and cultures form the basis for the continuities and discontinuities that both challenge and underpin this project. As a consequence, ensuring program momentum and continuity can prove difficult, although the turnover of staff and students ensures that a broad range of perspectives is considered.

The three narrative voices heard in this chapter belong to an end-of-career Australian researcher who has spent two semesters on the Canadian campus (R1); an early career researcher, an Indigenous Hawaiian, who has recently taken a position on the staff (R2); and the Head of School, an experienced mid-term career researcher, who has held this position for 3.5 years (R3). Our ongoing work involves the use of collected data, government documents, scholarly literature, and

our own critical reflections, but we also recognise that the perspectives we present are necessarily framed by our own cultural experiences, understandings and limitations. We do not set out to be definitive in our views but to orient our project in ways that do justice to the complexities of what we would ultimately like to achieve. We seek to increase the knowledge and understanding of both staff and students about Aboriginal histories, perspectives and contemporary realities.

Several enabling conditions converged to create our work. First, the professionals brought together to teach in this innovative program share a deep commitment to issues of human rights, equity and social inclusion. This is manifest in how and what we teach, and in our professional lives and scholarship beyond the classroom. As such, we are receptive to the critique that "teacher education programs don't often study this [Indigenous versus Western] epistemological dynamic, not to mention indigenous knowledges and ways of seeing … [and thus, that] teachers and professors will have to become researchers of indigenous knowledges" (Semali & Kincheloe, 1999, pp. 48-49). Second, our university has adopted an Indigenous Education Strategy (CSU, 2007) that mandates a need for indigenous perspectives and contemporary realities to form part of the curriculum in every course, and for staff to have access to cultural competency training. We understood that our journey towards indigenous cultural competence could serve to enact a "best practice framework" (Universities Australia, 2011) and have worked toward that aim. Third, we felt a pressing need to respond to developments in the Ontario educational context in relation to First Nations, Métis and Inuit (FNMI) peoples and issues. The province released its Ontario FNMI Education Policy Framework (Aboriginal Education Office, 2007), followed by *Aboriginal Perspectives: A Guide to the Teacher's Toolkit* (Aboriginal Education Office, 2009). Finally, we also share a view that while this work would certainly benefit our FNMI students and those that our graduates will eventually teach, our mission is to educate all staff and students as core business. We are keen to ensure that our values are made explicit and evidenced in our professional practice (Loughran, 2007) rather than being mere platitudes.

THE PROCESS

The focus of this project is to provide a flexible professional study framework for staff and students to engage with indigenous histories and perspectives in a short-term primary education teaching program. This is achieved by working towards a collective professional knowledge of First Nations' cultures and understanding what this means in an educational context. We consider how best it can be recognised, honoured and developed into an appropriately flexible structure, curriculum and pedagogy. This enables staff and students to learn together as we explore ways to effect changes in the practices of staff and students, and this learning forms a journey of professional study (Robb, 2000).

Initially, staff and students must confront current stereotypes and social issues through deliberate and thoughtful engagement with First Nations people, their histories and their cultures in as many different ways as possible. This includes

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visiting speakers, workshops, professional reading and discussion sessions, excursions and intercultural exchanges in different settings. It also involves an ongoing process of establishing protocols that reflect the growth of our awareness, and our desire to develop meaningful and worthwhile First Nations perspectives in our programs. Our intention is to inform and engage our students in reflective practice about the place of indigenous perspectives in their studies and in the practices they will employ, and to ensure that we develop courses that welcome First Nations students.

In the early days of the course we began, informally, with an ongoing process of signposting our recognition of the importance of First Nation Peoples and their cultures within the physical environment of the building. We achieved this by using Aboriginal words to name rooms, and placing relevant artwork, artefacts and information strategically around the public thoroughfares and classrooms.

Signposting was further enhanced from 2007 onwards, with the public acknowledgement on the first day of classes of the traditional custodians of the lands upon which the university campus is now situated, and at all meetings and public gatherings on campus, where a local Aboriginal person is not available to provide an official welcome to country. Initially, although this protocol was new for most students, they appreciated the intent, although for a small number it was confronting. Since 2007, graduation ceremonies have started with an official welcome to country and traditional welcome prayer, given by visiting First Nations people.

More formal engagement in developing a professional collective understanding of First Nations cultures began with a First Nations speaker giving a powerful keynote address at the 2007, now an annual component of the "Equity and Social Justice Conference" run for our teacher candidates. These experiences have now been extended to include a full day excursion to Crawford Lake, a recreated Haudenosaunee village, where staff and candidates are addressed by an Elder and participate in a range of activities to simulate daily life there a century ago. They make links between what they experience and the curriculum in a range of school subjects. In addition, during Orientation Week, the candidates are led through an interactive experience by a First Nations speaker who specifically explores contemporary social realities. These include displacement intergenerational trauma and First Nations' history of their experiences with the British Crown and Canadian Government to learn about its long-term effects on Aboriginal people.

These led to the formation of a staff professional learning community activity entitled *Our Learning is Our Work* (OLIOW) (from Fullan, 2008). This began with a staff reading program. Staff were asked to read this article in advance and to engage with it in both structured and unstructured ways. The initial reading helped to foreground the importance of story and storying in indigenous cultures, for "stories hold within them knowledges while simultaneously signifying relationships" (Kovach, 2009, p. 94). It prompted inquiries about "Whose stories are being told?" and the fact that "There are many Aboriginal stories." Thinking through this enabled participants to understand that we work within a "Eurocentric history," and to realise the complication of Canadians accepting European stories

and seeing one world, while Aboriginal peoples have multiple stories for the reality of the world. In a similar vein, voluntary discussion circles, combining staff and students, were initiated to address their concerns. Together, these opportunities for talk led to the establishment of trust, enabling many doors to be opened and rich and meaningful dialogue to occur.

More recently, the program has been structured to allow students to start engaging with initiatives outlined in the Royal Commission on Aboriginal Peoples (RCAP) of 1996. Specifically, it noted that in nations-to-nations relationships, Canadians were unaware of the history, origins and progress of First Nations peoples. The initial teachings within the Social Studies classes focused upon presentations on Canadian residential schooling systems and the dynamics of First Nations and settler interactions. Our candidates were then engaged in developing integrated curriculum units. Their engagement with these units and their own personal stories provided opportunities for critical reflection about how stories are actually shaped and told. In 2011, we offered our students the opportunity to undertake a semester of practicum in a school on the nearby Six Nations Reserve. Further, we are currently working at brokering some 3-week intensive opportunities for students to work with First Nations communities as part of a third, optional practicum experience.

A process is emerging. It is important to note that while the overall processes remain constant in each new year of study for the students, the ways in which these are instigated are continually modified to reflect the changing staffing complement, the accumulated learning, the contexts and situations. Our aim is to reconfigure the "practice architectures... [that] prefigure practices, enabling and constraining particular kinds of sayings, doing and relatings among people within them, and in relation to others outside them" (Kemmis & Grootenboer, 2008, p. 57) in relation to Aboriginal education, broadly envisioned. Because these practice architectures are generally constructed by people, we worked to design a course of study and learning that would encourage a change to our own practice. We do this by taking indigenous histories and perspectives more seriously, by making them more explicit in our work – learning, teaching, curriculum development, pedagogical innovation, and collaborating with professional communities. Our intention in crafting this emerging pathway of professional study is to foreground our professional *praxis* – with questions about what should we do and in whose interests we act (Kemmis & Smith, 2008). These emphasise the moral as well as intellectual imperatives of our work.

CRITICAL REFLECTIONS

This evolving process provides staff and students with practice-based professional expertise and a genuine commitment to achieve the goal of developing indigenous perspectives in our work. Each of us has a unique set of practice-based experiences that are complex, rewarding, challenging, frustrating and exciting. In what follows, we offer individual reflections about our ongoing work.

R1: Researchers tell stories, and this journey is very much about our own stories and our own practices. I came to Canada in many ways as an outsider – I am not Canadian, I am not indigenous – but I am an educator and researcher strongly motivated by issues of social justice, particularly for indigenous populations. It was in these contexts I first became conscious of the ways in which we continuously move across the roles of being insiders and outsiders in particular spheres of knowledge and culture. In 2007, my first visit, I was aware of my outsider status, unsure about being in an advocacy role for fear of speaking for others. At the same time, I wondered how change could be initiated if I didn't begin discussions. I was juggling many ideas and issues, unsure of how to proceed. Firstly, I noticed a lack of evidence of any real engagement at any level with indigenous perspectives, in our own course and a range of other education contexts. This reminded me of just how invisible indigenous perspectives, an area I had been working on in the Australian context, can be, so I took the opportunity to present a workshop for candidates and staff about my work in Australia. The second visit in 2009 saw considerable change, as signposting was in place and more formal processes were being implemented. This was an exciting time to experience the genuine engagement of staff and candidates with new initiatives. Although time in Ontario was short, I felt committed to this work and I did not want to just walk away. I was delighted to be invited to continue my engagement from Australia, in an adjunct position. This has provided an interesting component of developing professional practices and working in a mentoring role from a distance. This engagement has given rise to continuing documentation of the processes and organisation and analysis of material, leading to a conference presentation in Australia and my being part of the writing team for this chapter. Although there have been challenges, I find this a rewarding way of working, experiencing different professional roles, refining and developing personal professional practice; for me, it also provides authentic evidence about the value of building a strong workplace agenda for professional practice.

R2: My story travels along a path where the indigenous knowledges are open to allow knowledge-keepers and knowledge-seekers to journey towards the (re)framing of hybridised ways of seeing the world through the colonisers' stories and through the traditions, contexts, and languages of the local indigenous people. In the context of teacher education, the ebb and flow of stories and knowledge are of critical importance. The morality and authenticity may not rely exclusively on policies and gatekeepers. There is a critical resonance in self-study and critical reflection – it is feeling the drum beat through one's heart – the critical discourse element of best practices, as our school of education moves to engage the traditional knowledge systems.

Working with the students I saw the story unfold using the learned knowledge as a foundational transmission towards students informing their learners of an authentic, animated and ancestral model of Ontario First Nations' histories – specifically, the Haudenosaunee and Anishnaabe communities. Global elements of indigeneity were accessed through traditional dances and storytelling from Hawaiian contexts. Most of our teacher candidates embraced the knowledges and

used them in a respectful manner that was engaging and enjoyable for younger learners. However, there were some indications in commentaries, mannerisms, exit tickets and course evaluations that the need, purpose and connections were "lost in translation." I believe that this is where a story may end and a cognitive imperialism continues. By that I mean, the storyteller may use the words to provoke notions of social justice and indigenous epistemologies; but, this is entirely participatory to the listener. Teacher candidates have the socialisation and future educative power to deny such stories. That is, teacher candidates had already in their toolkit the intrinsic power of deniability.

The question arose – can we deny with a critical conscience? In our progression in social justice and indigenising the academy, we continue to provoke stories from the teacher candidates which are as varied as the communities from which they come. Nationalism and community orientation came into play and have subtle effects in the negotiations and discourses during our classroom sessions and in their writings, and in their choices of lesson plans. Storytelling in my teachings looked to examine notions of power and privilege. The approach in several course-works and through the general atmosphere for the school year 2011 was to engage, resonate and cross the realms of what were traditional Western knowledges and epistemologies. This warranted a caveat to our approach. As educators, we take the "tools of the master" and use them in our social justice (re)constructions; however, we should be mindful of appropriation of indigenous teachings for our own dealings and undertakings. As instructors and program developers, we take the context of those in positions of power and "return its gaze." Again, we are constantly mindful of absorbing histories and cultures with sublime colonising strokes. So in this area, the storyteller was informed of the intrinsic power of assimilation and using traditional knowledge into one's own universe. In a sense, the contexts of our school's approach to indigenous teachings offer provocations as noted by Tafoya: "presentation of self, perception of self and others, implications for cross-cultural communications … the political and socioeconomic power involved in who defines whom" (1997, p. 193).

R3: I see this work as core business of our school. I came to the Ontario School of Education from the role of Faculty Sub-Dean Learning and Teaching in Australia where we were very engaged with these issues, in part as a result of our University's Indigenous Education Strategy (CSU, 2007). We were working as a Faculty to imbed indigenous perspectives and contemporary realities in all of our courses. When I moved to our Canadian campus, it became clear that we would need to engage in the project of internationalising our Strategy, as it was understandably focused on Aboriginal and Torres Strait Islander peoples and perspectives in Australia. Early in Ontario I saw it as important work for individuals to increase their knowledge and awareness and to translate it into their classroom practice. Originally I thought the rotating model of staffing was more a frustration than an opportunity. However, slowly my understandings shifted and I noted that the collective is really the unit of analysis. Rather than obsessing about who was new and what they had missed from previous semesters/years of this work, I appreciated that we all bring different gifts and are on different roads in

this journey. What became important in this work was that we were *on* the journey, and as a collective, we were broadening and deepening our practice to be more informed, more inclusive and enacting the values we profess – human rights, equity and social justice.

This shift in thinking also influenced the ways in which these issues were engaged within the program. In parallel to my shift in concern from what individuals know to what the collective knows [from "I" to "we"], we also shifted from what was happening in terms of pedagogy and curriculum in individual subjects, to focus on the whole course [from subject to course]. Treating the course as our unit of analysis in this instance signalled a fundamental shift in our thinking. First, it meant that we could no longer be satisfied thinking that a colleague "knew more" and was addressing these issues in his or her subject. We started asking "What are we all doing to keep these issues in play?." Second, it meant that we took a global view about the tapestry of opportunities we were weaving for and with teacher candidates to work with them to think about indigenous issues and perspectives in relation to their own burgeoning practice. We were forthcoming about what, how and why we were learning about these issues, in line with Loughran's contention about "making the tacit explicit" (2007, p. 4), in an attempt to model these same processes, and their importance, for the teacher candidates.

Finally, there is a real luxury in focusing on the journey, instead of being preoccupied with if or when we'll arrive at the destination. Our work of "realising" exemplary professional practice is aspirational, and affords us time to think deeply about how each piece we read, each discussion circle we engage in, or each pedagogic or curricular change we make will contribute to strengthening our course, enriching the experiences of our teacher candidates, and affecting the communities in which we live and work.

CONCLUSION

Although our steps often seem small, we believe they will lead to a campus where First Nations peoples and perspectives are simply an inclusive part of daily campus life, where there is an important space for indigenous learners and learning and where Indigenous Studies is a key perspective within our courses. Given the nature of the continuities and discontinuities of the staff profile and the student cohorts, both integral aspects of the Ontario Campus, this will not always be easy. We believe, though, that documenting and critically reflecting on our processes over time and continuously researching our own professional development and practices is essential. There will be many and varied opportunities for all participants to move in and out of this process in ways that will enrich their professional experiences. Such opportunities will also sustain a strong and meaningful professional program on the campus, and will encourage our staff and students to be thoughtful and compassionate educators within the Ontario education context and far beyond.

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AMANDA DAVIES

31. USING SIMULATIONS IN POLICE EDUCATION

Creating a learning environment for educating police officers to meet the requirements of a contemporary democratic policing profession offers potential for aligning the fundamental concepts of practice-based education (PBE) with police education and practice. This chapter presents a case study of a police education program which exemplifies the embodiment of such an alignment. The role of simulations as a conduit for supporting the delivery of a PBE program is discussed.

The Setting

Charles Sturt University (CSU) School of Policing (SOPS), in partnership with the New South Wales Police Force (NSWPF), provides the police officer recruit training program delivery for students seeking to gain employment as police officers with the NSWPF. This program is the Associate Degree in Policing Practice (ADPP). The goal of the ADPP program is to provide students with learning experiences that enable them to develop and demonstrate understanding of best practice in the core areas of their future professional practice. To contextualise the following discussion it is valuable here to briefly explain the program of study and standard progression of students in the ADPP program. As depicted in Figure 26.1, the course consists of five sessions of study, each session being approximately 14 weeks in duration. Students elect to study Session 1 face-to-face (14 weeks) or by distance education over 26 weeks. The distance education mode includes compulsory attendance at four residential schools for face-to-face classes comprising 1 x 4 days and 1 x 6 days in each 14-week session.

All students attend face-to-face classes at the NSWPF Academy for the duration of their Session 2 studies. It is at this juncture that students who chose to study Session 1 by distance education are integrated into classes with those who completed Session 1 through the full-time on-campus mode. On successful completion of Session 2, students attest[i] and are employed as Probationary Constables with the NSWPF and assigned to a local area command. The following Sessions 3, 4, and 5 (collectively referred to as Year 2 of the ADPP) of study are completed while the Probationary Constables are operational and on duty at their designated police station. Following successful completion of Session 5, a Probationary Constable is confirmed as a Constable of Police with the NSWPF and is awarded the Associate Degree in Policing Practice from Charles Sturt University.
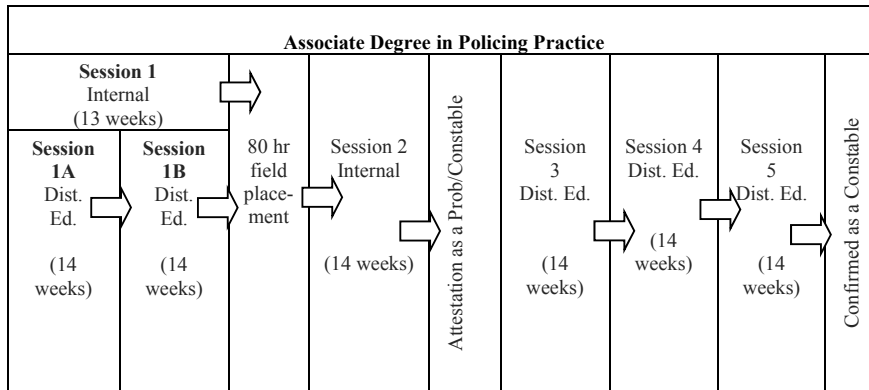
Associate Degree in Policing Practice								

Figure description:

Session 1
Internal
(13 weeks)

| **Session 1A** Dist. Ed. (14 weeks) | **Session 1B** Dist. Ed. (14 weeks) | 80 hr field place-ment | Session 2 Internal (14 weeks) | Attestation as a Prob/Constable | Session 3 Dist. Ed. (14 weeks) | Session 4 Dist. Ed. (14 weeks) | Session 5 Dist. Ed. (14 weeks) | Confirmed as a Constable |

Figure 26.1. Associate Degree in Policing Practice course structure

Eligibility to study the ADPP is governed by professional suitability standards prescribed by the NSWPF and academic entry standards as prescribed by CSU. Student cohorts present with a range of ages (18 to 58 years), cultural backgrounds, education and life experiences.

The ADPP curriculum is underpinned by the professional knowledge, skills and attributes identified by the NSWPF as necessary to be demonstrated by students at their attestation and their following confirmation. In consultation with the NSWPF, the university develops, monitors, evaluates and revises the curriculum in the process of providing learning experiences which will best prepare students for the reality of their policing practice. Although the fundamental role of police officers in a democracy remains consistent, societal changes influence the knowledge and skills required by police officers and consequently affect the content and learning experiences embedded in the ADPP curriculum.

The Focus

The educational challenge is to create learning environments and opportunities which will connect student officers to the reality of their future work arena and afford opportunity to practise the application of their newly acquired knowledge and skills in a risk-averse environment. In addressing this challenge the ADPP embeds simulations as key learning tools and as effective conduits for practice in the distance education (online) components, the face-to-face components and the workplace-based components.

Two key concepts have influenced the utilisation of simulations for the ADPP learning context. The first concept entails notions similar to that proposed by Aldrich (2009, p. 8), who wrote:

Educational simulations are structured environments abstracted from some specific real-live activity, with stated levels and goals. They allow

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participants to practice real-world skills with appropriate feedback without affecting real processes or people.

Secondly, extensive work suggests that providing access and exposure to learning environments that closely resemble real life supports learner understanding (see Herrington, Oliver, & Reeves, 2003; Biggs & Tang, 2007) continues to be an influencing factor supporting the incorporation of simulations in the multi-faceted ADPP learning program. Developing simulations that resemble the reality of the police work environment and situating them as key learning tools affords teachers the opportunity to provide learning environments that reflect Kolb's (1984, p. 28) concept of experiential learning: "learning is a continuous process grounded in experience." Combining the underpinning concepts of PBE as referred to in Chapter 1 with the pedagogical philosophies identified here has been the cornerstone on which the simulations used in the ADPP program have been built. The utilisation of simulations has gained traction from the positive student feedback about the learning experiences. Two further elements have influenced the design and inclusion of simulations in this police education program: (i) the personal safety issues inherent in the nature of policing create restraints in the design and implementation of learning experiences for policing students, and (ii) consideration of the needs of students who choose to undertake their Session 1 studies by distance education. These students who study remotely (except for 20 days of residential on-campus classes across 6 months), while the on-campus students are exposed to simulated policing situations on a daily basis, are expected to attain similar standards of learning achievement at entry into Session 2 as their on-campus Session 1 colleagues. The following discussion explains how simulations are employed to provide a PBE approach to the distance education study program, the on-campus learning program and the workplace-based study component of the ADPP.

A parallel premise, implicit in a PBE approach and embraced in the delivery design of the ADPP, is the collective concepts which reflect the pedagogical paradigm of problem-based learning. The core characteristics of problem solving, according to Andre (1986), are those which require mental and behavioural activities to deal with problems and which may involve the combination of cognitive, emotional, behavioural and motivational components. Problem-based learning specifically in police education is a method characterised by the use of real-world problems that enable students to learn critical thinking and problem-solving skills in the process of acquiring new knowledge. Further, there is support (see Barrows & Tamblyn, 1980; Hmelo-Silver, 2004) for the notion that contextualising learning through utilising real-world problems enables students to employ higher-order thinking skills, a desired outcome of police education programs. Here, simulations provide an avenue through which to present policing problems that resemble those commonly encountered in an officer's professional practice. The challenge is in the design of the simulation so that it will engage learners on cognitive, emotional, motivational and behavioural levels.

The Strategy

In the following discussion, examples are presented of the variety of methods employed in establishing simulations as key learning experiences for students in the multi-streamed study pathways of the ADPP.

Students in the distance education Session 1 program undertake the study of three subjects in each 3-month period. The delivery of the subject content and learning activities for these subjects is via subject websites known at CSU as subject online "interact" sites. In this domain the subject coordinators have designed policing simulations that are supported by various audio and visual technologies in the online environment.

To illustrate, the subject PPP102 Police Communications and Investigations utilises a number of online simulations to contextualise students' learning. One such simulation begins with a police radio call, in which the audio has been recorded from the NSWPF dispatch centre and is therefore similar to that which would be heard while travelling in a police patrol car. This call seeks police assistance to a motor vehicle crash. Students access this simulation through the subject interact site, and are required to follow the simulation as it plays out on their computer monitor. Built into the simulation are check points at which students are able to check their understanding and the application of their knowledge. All sessions of delivery for subjects within the ADPP are formally evaluated by students in each session of offer. The feedback from students who have studied PPP102 and completed the simulation exercises provides clear evidence of the value to students' learning. The simulations engage the students on cognitive and emotional levels, connecting them with the reality of their future practice. These simulations offer an opportunity for students to practise the critical thinking skills needed for developing a hypothesis in relation to the motor vehicle crash and solving the problem presented, namely the cause and effect of the crash. Davies and Nixon (2010, p. 288) reported the following student comments:

> I liked how you were able to be placed in real scenarios so you can put what it is that you are learning into a bit of practice.

> holds greater interest in the material as it is what has actually happened not just learning material that you have to imagine how it will be applied.

> makes your mind go through the process of the scientific method and critical thinking with an actual event that has taken place ... putting the process into practice.

> I really like the audio of the police radio and the voices of the various witnesses, felt like they were actually talking to you as the officer on the scene.

> Using a real-life accident places the student in the moment and demonstrates the seriousness of the issues at hand.

These comments, giving voice to the student experience, provide evidence of the value and alignment of the rationale for incorporating simulations in the online distance education learning delivery. These simulation exercises are not stand-alone activities; they are further supported, expanded and debriefed when students attend the face-to-face residential classes.

Students who undertake ADPP studies through the on-campus study pathway are afforded an array of simulation experiences. As in the distance education learning delivery, students interact with online simulations that provide experience in contextualising their learning and practising the application of their understanding and skills. The campus is equipped with a simulated village and it is here that students participate in simulated policing scenarios – putting into practice the theory and skills they acquire as they progress through the session. Students in all pathways, on-campus Session 1 and 2, and the distance education students when they are on campus during the residential schools, participate in policing simulations at the village, which are specifically designed to build confidence in core policing skills. In Session 1, these simulations are contained within the subject Simulated Policing Acquiring Confidence, presenting students with uncomplicated situations to resolve (problem-solve) and in Session 2 this progresses to more complex situations presented in the subject Simulated Policing Acquiring Competence.

These simulations are complemented by simulated policing scenarios in which students participate within dedicated subjects, focusing on specific areas of knowledge and skill development. For example, the Communications in Policing subject in Session 1 is designed to develop students' understanding of communication concepts and their capacity to apply effective communication in a broad range of situations. Such situations can include people exhibiting diverse needs, such as victims of crime, offenders, members of the public suffering trauma or a mental illness. The pivotal learning objective is to give students opportunities to practise and develop understanding of their strengths and weaknesses in this critical policing skill. Student feedback for this subject consistently identifies the value of such practice of their skills in a safe environment in assisting their awareness of how they will respond in the reality of their policing duties.

During 2011, programming for the delivery of Session 2 was modified to accommodate "Operation Readiness." This program replicates the rostered duty shifts and police duties inherent in the workplace for probationary constables of police in New South Wales. Operation Readiness requires students to draw together the knowledge and skills they have acquired during their studies in Session 1 and 2 and to perform simulated policing duties resembling those they will be expected to demonstrate on commencement of their employment as a probationary constable. The New South Wales Police Academy campus becomes an extension of the simulated village (mentioned previously), requiring students to interact with the general public in performing their simulated police duties. An evaluation of this simulated policing program is currently in progress, and anecdotal evidence meanwhile suggests that students consider this one of the most valuable periods of their police education prior to their deployment. The main

thrust of the students' comments relates to the opportunity to "practise" their skills and demonstrate their understanding, while learning from the experience and adapting or modifying their skills in the process of preparing for the real world of police work.

Complementing the diverse range of simulations incorporated into the ADPP program is the high-tech "use of force" VirTra simulation. A mandatory requirement for Session 2 students is the ability to demonstrate both an understanding of the appropriate application of force in police work and the physical ability to apply the appropriate use of force tactic. "Use of force" refers to a combination of physical skills including firearms, batons and weapon-less control tactics. Clearly, it is neither practical nor desirable for students to practise the full extent of use of force tactics on other people. Following the lead of the aviation and military industries globally, policing organisations are increasingly relying on purpose-built simulation facilities to provide opportunities for police students to practise use of force decision-making in situations which resemble the dangerous, unpredictable environment in which police operate. These facilities engage a variety of computer technologies, grounded in the media/film and gaming industries, to replicate real-world environments and situations, the fidelity of which is governed by the underpinning objectives to be achieved by the learning experience.

During the final weeks of their studies, Session 2 ADPP students are exposed to the VirTra technology policing scenarios which provide opportunity for them to be immersed in and resolve potentially volatile, life-threatening encounters with members of the public, reflective of the reality of their future profession. The VirTra simulations are designed to be as immersive and realistic as possible; the system uses real firearms (gas fired, no bullets), the student stands on a platform surrounded (300°) by floor-to-ceiling screens onto which is streamed video footage depicting life-sized people and objects. The students' senses are engaged through seeing, hearing and feeling: the training platform has transducers so that the student can feel helicopter vibration and/or heavy vehicle traffic if that is occurring in the scenario. Although the responses from the characters on the screens in the scenarios are pre-recorded, dependent upon the behaviour of the student officer in the interaction, the VirTra system provides the instructor with the capacity to vary the reaction of the characters to the student's communication and behaviour, creating unpredictable outcomes.

In 2011, 372 students of a Session 2 class were surveyed about their experience in the VirTra simulations. The responses revealed a range of reflective comments, exemplified by the following:

> It's just good to be put in a situation where you don't know what to expect, so you can use your own instincts and decision-making skills as that is what you will be doing in the field. Even if you stuff up in practice you learn from the mistakes you make.

It made the scenario real, with real situations and real people, in one of the scenarios there were lives at risk so it made it more realistic, the experience has huge benefits to my policing in the field.

The scenario-based simulations help to incorporate all of the learning from the different subject areas.

As they were lifelike scenarios, it has helped me understand how people may react in real life.

Extremely valuable, the next time I use my firearm it will be for real, I wish I had more practice like this.

Students' comments in the survey indicated that the fidelity aspects of the VirTra system combined with the realistic nature of the simulations enabled students to experience the nexus between the classroom, albeit their ADPP studies, and the reality of policing the streets.

The reality of policing the streets as an authentic simulation is the focus of the final ADPP session in which simulations are a pivotal learning activity. As indicated in Figure 26.1, students study Sessions 3, 4 and 5 (collectively referred to as Year 2) through distance education while employed as probationary constables policing in their assigned community. A blended approach to learning delivery is the foundation of the Year 2 study program. Formal on-the-job learning provided by designated senior police to whom the probationary constable is assigned is complemented by the distance education studies delivered in the e-learning environment. In a manner similar to that used with simulations in the Session 1 distance education subjects of the ADPP, the Year 2 subjects incorporate simulated policing scenarios. Audio and visual elements are incorporated in the simulated policing incidents to increase the sense of realism. The simulations in the Year 2 subjects play a dual role. First, the scenarios are presented in the e-learning environment and depict commonplace policing situations typical of those encountered by probationary constables, thereby connecting theory to practice. Second, the scenarios simulate real incidents and allow probationary constables to practise, reflect on and modify their decisions in a risk-averse environment. This practice provides a conduit for developing probationary constables' level of preparedness for potential outcomes in real-time encounters. Cybulski et al. (2010, p. 77) evaluated the impact of the e-learning delivery approach on students' (probationary constables) experience and learning outcomes. A key finding of their study was the acknowledgement by 93% of the research cohort that e-simulations facilitated connection between abstract topics and the reality of policing practice. In reviewing the effectiveness of a blended learning approach for the delivery of the Year 2 ADPP studies, Bushell and Bodiam (2010) reported that students identified two key benefits of the learning approach: (i) the realism of the e-simulation scenarios encouraged learner engagement; and (ii) the e-simulations provided opportunities to practise independent of time constraints and as often as desired, resulting in increased confidence.

This chapter has presented the rationale for and examples of the embedding of simulations in a police education program as a platform for providing a practice-based and problem-based education approach to learning. The intrinsic nature of democratic policing practice will continue to dictate the core knowledge, skills and attributes that police education graduates need to demonstrated. For the ADPP program to maintain currency and relevance, continued vigilance to the needs and expectations of the police profession will guide future innovation and renewal of program delivery.

NOTES

[i] Police recruits undergo a formal ceremony of attestation as they transfer from the Academy to employment as probationary constables with the NSW Police Force.

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27. VALUING STUDENT VOICE
IN PRACTICE-BASED EDUCATION

Transforming the Professional Practice of Teachers

Practice-based education (PBE) is a pedagogy of professional learning which privileges the importance of learning through reflection in practice, contextualised and situated within professional craft knowledge, tacit legitimation claims and theoretically informed practice. It is "an approach to education that is grounded in the preparation of graduates for occupational practice" (Higgs, 2011), a work-*based* and workplace *training*. This locates PBE within wider debates around the role of reflective practice and professional craft knowledge. As such, PBE and related pedagogies often find expression within teacher education and the education of healthcare professionals. There is much congruency of these professional learning practices and contexts – both being characterised by boundary-crossing practices between the field of practice and the academy. PBE is deliberately characterised as professional *education* rather than the perhaps more mere utilitarian and instrumental *training* (Billett, 2010; Higgs, 2011). This distinction makes troublesome some recent UK education policy which seeks to privilege a discourse of "teacher training" as a policy technology aimed at reducing the value, priority and role of theoretical knowledge and the university. It is into this context – PBE valuing practice, reflective learning, workplace experience and clear links between the boundaries of the university and the boundaries of the occupational practice – that we position a need to capture and utilise Student Voice. We assert that Student Voice is a vital lens (Brookfield, 1995) through which professionals in training can understand their practice.

   As a pedagogic practice, we can understand PBE as comprising normative and relational elements and, as such, teacher learning fits well within a PBE paradigm. We assert that teachers' professional learning is complex and sophisticated. In discussing teachers' professional practice-based learning, Cochran-Smith and Lytle (1999) wrote of knowledge *for* practice, knowledge *in* practice and knowledge *of* practice. PBE locates learning in all three of these domains and their interrelations. In this conceptualisation of the reflective practitioner (Schön, 1983), PBE embraces 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" (Higgs, 2011, p. 9). It is a way of making sense of action; a way of learning from and in practice (Schön, 1983). Thus, professional practice prefigures and frames individual tacit knowledge and individual action and learning. Our

argument here is that authentic Student Voice is a powerful pedagogic and relational medium through which we can provide educators, as professional practice-based learners, with a sound basis for reflective practice and intimacy with others. In presenting the two case studies here, we suggest that the incorporation of the Student Voice "lens" into PBE pedagogy helps to construct the meaning of practice and of professional reflexive identity.

Contextualising the Value of Student Voice for Professional Learning

The term *Student Voice* itself is highly contested. As Fielding (2009) suggests, Student Voice is a "portmanteau term." In speaking and writing about "voice" we recognise its role as "strategic shorthand'" and its limitations (Robinson & Taylor, 2007, p. 6). Despite the diversity of reasons why individuals, practitioners and institutions become interested in and involved with Student Voice work and research, the requirement for capturing and utilising voice remains. The Student Voice "movement" represents something rather special in the field of education – an opportunity for theory and practice, researchers, academics, practitioners and teachers and (most important of all) learners to co-construct the meanings of what they do and how and why they do it. To co-construct the field and the shared understandings within which professional practice takes place requires the voices of learners, and any articulation of PBE omitting those voices is barren, disembodied and unsubstantiated.

What is exciting about the Student Voice movement is the diversity of practice and the commitment of learners and practitioners to the principles of social justice, democracy, active citizenry and children's' rights. On some levels, Student Voice is itself fundamentally bound up with social justice and democracy. On other levels, Student Voice can be seen as a mechanism for school and college improvement. Occasionally, schools and colleges pay lip-service to Student Voice and in doing so construct a discourse of Student Voice that operates as a controlling agent, "*an additional mechanism of control*" (Fielding, 2001, p. 100). Furthermore, some commentators suggest that Student Voice is a "policy technology" (Ball, 2001) providing "efficiency gains" which aid and legitimise competition between educational institutions, leading to increased marketisation (Gunter & Thomson, 2007).

Student Voice that is authentic and inclusive has the potential to subvert, undermine and transform limiting and limited market cultures: there is some genuinely exciting, diverse, radical and meaningful practice "out there." Yet all too often educational practice is invisible, hidden away, with academic and policy-makers' voices taking priority over the stories of teachers and learners themselves. Student Voice is often linked to what we mean by an "active citizenship" (Ruddock & Flutter, 2000) in its broadest sense: to develop learners who can participate in society in a socially responsible fashion we need to involve them in decision-making. We need to encourage and moreover allow young people (and learners of all ages, in fact) to have a voice, as a means of educating them about their role in the world as much as their role in their own learning. In this way, Student Voice

informs teachers' practice and teachers' professional learning. In asserting this, we situate Student Voice as a valuable and powerful mechanism for educational change. It provides rich professional learning evidence that can be used to foster reflective practice, research-informed practice and professional learning. However, developing research programs and mechanisms through which voice can be captured is by no means simple. Some Student Voice practice comes with a warning (Ruddock & McIntyre, 2007) that cynical attempts to capture learner voice for "performativity" purposes alone end up perpetuating the cynical use of learners as objects, passive in their own educational journeys.

Our argument here, in both the case studies we present, is that genuine engagement with the Student Voice can inform and transform professional learning. It can help to provide a rich context within which practice can be better understood. In this way, Student Voice can aid professional practice, which is itself identity forming.

THE CASE STUDIES

We present here two case study examples drawn from the authors' own research, documenting the role of Student Voice as a basis for teachers' professional practice-based learning. In Case Study 1 (see Kidd, 2011) we have an example of how Student Voice (in the form of podcasts made by younger learners) can be used to inform the reflective and reflexive practices of pre-service teachers-in-the-making in the UK. In Case Study 2 (see Czerniawski & Garlick, 2011), Student Voice is examined within the community of a large inner-city school, informing the practice and continuing professional learning of in-service teachers and teacher educators involved in a 5-year project between the school and a local university.

CASE STUDY 1: SUPPORTING THE REFLECTIVE AND REFLEXIVE PRACTICE OF TRAINEE TEACHERS THROUGH STUDENT VOICE PODCASTS

The Setting

In this case study a Student Voice initiative is deployed as a means to better inform pre-service trainee teachers' views regarding teaching and learning in the all-important induction period of the training year (Kidd, 2011). A series of interviews was conducted in a diverse variety of local contexts in schools and colleges, which sought to explore young learners' views on teaching and teachers. The recordings were then categorised and segmented into a rich variety of small audios (podcasts) and used as a learning and teaching resource as part of the teaching in a pre-service Professional Graduate Certificate in Education (PGCE). This professional (work-based) learning program was developed specifically for London-based teachers in the UK to enter employment in the "further education" or "lifelong learning" sector. The audios of the Student Voice(s) better inform trainee teachers' boundary-crossing practices as they seek to unite what they learn from the academy with that from practice in the field. The Student Voice initiative seeks to

reform unsituated learning as situated in and contextualised by what the Student Voices have to say.

The Focus

This case study presents a research-informed practice which focuses upon the links between the twin lenses of (a) trainee teachers' reflective voices and reflective learning and (b) young learners' voices articulating their experiences of learning and teaching. The use of the insights, reflections and opinions of local learners is significant here. Within the author's own PBE pedagogy, as a teacher educator, it is desirable to model to trainee teachers the importance of utilising the Student Voice as the basis for reflective (and reflexive) practice; another lens through which to understand how our own practice and professional learning is located and grounded (Kidd, 2011). It is vital to develop a context through which Student Voice can be expressed, and to demonstrate the value to be had for (new) teachers to listen to (their own) learners.

The Strategy

Through a series of interviews, a "resource bank" or archive of podcasts/audio records has been created which is then used as a teaching resource to support the professional learning of trainee teachers. The interviews took place with 16 to 19-year-old learners (from the UK Further Education sector) in institutions local to the university where the teacher education program is based. These recordings provide an insight into what young learners in a variety of situated contexts – schools and colleges – think about teaching and teachers. The audios are used extensively during the induction period of the pre-service teacher education program. In this way they are a resource to aid the reflective learning undertaken by trainee teachers. The argument is that reflecting on the Student Voice can support novice teachers' boundary-crossing (Heggen, 2008). In this way, listening to learners is framed as a "democratic educational" (Giroux, 2005) practice, one with tremendous value in informing PBE. In this context,

> Voice, quite simply, refers to the various measures by which students and teachers actively participate in dialogue. It is related to the discursive means whereby teachers and students attempt to make themselves "heard" and to define themselves as active authors of their own worlds. (Giroux, 2005, p. 454)

Challenges Faced

Central to the teacher education pedagogy and PBE of this case study is the value proposition that echoes much Student Voice enquiry (Ruddock & Flutter, 2000; Ruddock & McIntyre, 2007): that teachers and learners must co-construct their own social relations and social practices. This is itself a challenge for pre-service

trainee teachers, many of whom arrive at the training program with a conceptualisation of teaching as something which is "done to" learners; seeing classrooms as a space for their performance, and not taking into account the agency and reflective practice of their own younger learners, who are often articulated and naively positioned as a passive "audience," rather than a co-conspirator. From this practice – using Student Voice audios early in induction – many trainee teachers are surprised at the insight younger learners can demonstrate into classroom practice. As Salisbury, Martin, and Roberts (2009, p. 421) suggest, "it is important to locate teachers and learners as active participants in at least some of the processes of learning."

It is by utilising the Student Voice within the PBE of teachers that we seek to move towards a more "*democratic schooling*" (Giroux, 2005):

> The concept of voice constitutes the focal point for a theory of teaching and learning that generates new forms of sociality as well as new and challenging ways of confronting and engaging everyday life. (p. 454)

CASE STUDY 2: STUDENT RESEARCHERS AT "EAST VALLEY" COMPREHENSIVE SCHOOL

The Setting

The Student Voice project which this case study explores was launched in conjunction with teacher educators from the University of East London (UEL) in January 2007 at the school by members of the Senior Management Team (SMT). East Valley Comprehensive Secondary School (a pseudonym) consists of approximately 860 learners and is located in a London Borough in a predominantly white working-class semi-industrial catchment area. The school was described as "outstandingly effective" in a recent government inspection report (reference retained for ethical purposes) and many of its teachers, its students and the UEL researchers involved in the project have represented the school and university at high-profile national events showcasing the Student Voice project and its relationship to the development of teaching and learning at the school.

The Focus

The aim of the project, from the school's point of view, was to provide a method of encouraging students to become actively involved in decisions about their own learning and empowering them with appropriate ways to do so. The school set out to:

– ensure that all learners, irrespective of their class, gender, ethnicity, and ability, were involved in decisions about how, what and when they learn, with whom, and the type of environment in which this occurs.

> – ensure that students were involved in school improvement strategies and the co-construction of policy-making with teachers. (Czerniawski & Garlick, 2011)

The Strategy

In the early stages of the project, 92 pupils received school and university-based training at UEL's Docklands campus in London. Teacher educators ran a series of short lectures and workshops at the university designed to help pupils to run productive meetings, gain confidence in the variety of ways they can voice an opinion, listen to one another's point of view, and have a rudimentary understanding of research skills and ethics. Visits to the university raised the profile of the Student Voice initiative in the eyes of the pupils and potentially also their aspirations for university applications. Following training the students carried out research using a variety of methods including questionnaires, lesson observations and interviews with young learners, staff and trainee teachers. This culminated in the production of three charters (Teaching and Learning; Behaviour; The Environment) for the school that reflected the concerns of the three "voices" as directed initially from the school's SMT.

The second year of the project involved dissemination of the findings back to trainee teachers at UEL as research-informed practice. Success of the first year was evidenced by students being asked to speak at conferences and being invited to national and regional award ceremonies. The second year was crucial in moving the project forward, maintaining momentum and enabling different students and new members of teaching staff to become involved. Further training took place at the UEL to enable the newer representatives to understand their role as student researchers and to recognise some of the issues in relation to respect and ethical working on such a project.

In the third year of the project a variety of Student Voice initiatives have taken place, including the training of six pupils from the "Global Voice" body to become researchers and share their experiences at a school in Finland. In the words of these student researchers, the aim of their visit to Finland was:

> To take on board any beneficial ideas from the Finnish School System that we could try to introduce here at [East Valley] (Quotation taken from presentation by students to their school governors).

The volunteering students, aged between 15 and 16, were members of the executive student voice body at the school and were allowed to take part in the research based on a variety of criteria including attendance, behaviour, affordability, and the degree to which they were up-to-date with school assignments. Student researchers were prepared through training sessions addressing topics that included an introduction to the Scandinavian education system, the relationship between methodology and methods, ethics, tools of analysis and the significance of contextual sensitivity, cultural norms/values and the specificities associated with the school trip regulations. The sessions varied in

nature; some were quite didactic, whereas others involved the six students discussing, choosing and designing their research tools with the authors taking a "back seat," offering support/clarification as and when requested by the students. Two staff members of the school accompanied the six students on a 6-day visit to Finland spent at "Quiet haven School." During the visit students carried out lesson observations, held interviews with young learners and members of staff at the school, and gathered photographic documentary evidence of their trip. On their return their findings were presented to the senior management of the school and the Student Voice executive body, and the legacy of these findings is currently being explored.

Challenges Faced

We have written elsewhere (Czerniawski et al., 2010) about the degree to which all learners in this project were able to determine fully the direction of enquiry and the degree to which the three strands represented the interests of the student body and/or the senior management of the school. Similarly, we have discussed elsewhere (Czerniawski, Garlick, Hudson, & Peters, 2010) issues related to those included, empowered, marginalised and alienated from the Student Voice experience at the school. Although many teaching staff were enthusiastically involved in the Student Voice initiative, others were not. Yet, as the project developed, most members of staff became fully supportive of the project, particularly as a result of noticeable improvements in classroom behaviour.

   Additional changes to the school include revised timetabling arrangements of certain lessons in response to student feedback, the redecoration of areas of the school, the introduction of student-led observations of teaching staff, student involvement in teacher recruitment, and the widening of pedagogic strategies of all members of staff. The students involved have brought about tangible differences in the school they attend and also within the community in which the school is located. Since the introduction of the project back in 2007, relationships between neighbours, the local police and staff and students at the school have improved as a result of a number of initiatives initiated by the Student Voice body. One such project has involved students working closely with the police to identify troublesome local areas where high rates of bullying have taken place. In feedback from the police it was remarked how "articulate," "confident" and "well-informed" students were when dealing community police officers.

CRITICAL REFLECTIONS

In the separate but related practices of the two case studies, we have positioned Student Voice as a powerful ingredient to inform a wider PBE. In this way, Student Voice informs the initial development (Case Study 1) and continued articulation and settlement (Case Study 2) of a professional self and a "professional identity." Beauchamp and Thomas (2009) have described this as (learning) "*how to be*,"

"*how to act*," and "*how to understand*." Constructing a teacher self is a learning process, one informed by both the academy and experience in the field.

In the two case studies presented above, we enable teachers to explore their "teacher (or teaching) selves," essentially through storytelling practices bound up with the adoption of learner voice. Thus, (trainee) teachers are not just listening to learners, but are encouraged to speak *with* (not *to*) learners as a means to develop their professional identities and craft practices. This is an essential voice by which to inform PBE.

Yet it is not a simple process: it is true that student voice initiatives are performed, grappled with and mediated in hectic institutions where learners and teachers have competing commitments, priorities and values. It is also true that, taking an historical perspective, the Student Voice movement is contested, tentative, embryonic and culturally situated. Yet most Student Voice initiatives are also collaborative and involve the integrity and passion that young learners and teachers bring to their work. If PBE really is a pedagogy of professional learning then this passion needs to be harnessed, appropriated and positioned as one of its cornerstones. One starting point is to authentically trust young people, as has been the experience of these student researchers at their school and within the local community. Embedding Student Voice in the recruitment and preparation of those entering the teaching profession would be one tangible acknowledgement of that trust. While many schools (in England) involve students in recruitment procedures (e.g. young people on interview panels; observing micro-teaching), this practice is not widespread. Neither is there evidence to show that university schools of education involve pupils during student recruitment interviews for teacher education courses. Ensuring that school and college students are prominent at the start of teacher preparation courses would raise the importance of young people in the eyes of future cohorts of trainee teachers and enhance their professional development.

LESSONS LEARNED: THE IMPORTANCE OF STUDENT VOICE FOR PBE

In answering the question *how do teachers learn*? Malderez and Wedell (2007) suggested that, through practice-based reflective action and evidence, teachers "pull together" experience. In that activity, teacher knowledge is formed by knowing *about*, *how* and *to*. Teachers are thus learners too – as are all practitioners. Practice itself is conceptualised here as a social endeavour whereby complex skill and tacit knowledge, although heavily situated, are also informed by theory and theorising. In this way, it is identity forming. As Danielewicz (2001) positioned it, teacher education pedagogy must be "insisting on identity," and in constructing practice, "becoming a teacher means that an individual must adopt an identity as such" (Danielewicz, 2001, p. 9). Thus PBE for teachers is not a mundane practice transformation but rather a pedagogy of identity transformation. Yet all too often we see in work-based professional learning, particularly in education and nursing, a gulf between practitioners and the academy. This is where the role of Student Voice can be enacted. Fully-realised practice, moving on from mere tacit

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knowledge, embraces a critical reflection both situated by the surroundings of practice and moving beyond it. As our two case studies have demonstrated, Student Voice can provide a deep and rich context for professional learning.

CONCLUSION

The escalation of market forces in education means that both learners and teachers are "now working within a new value context in which image and impression management … are becoming as important as the educational process" (Ball, 2001, p. 13). It would be a tragedy, therefore, if the zeitgeist devotion to student voice is reduced to a "rhetoric of agency" (Gunter & Thomson, 2007) associated with student voice narratives that embody tokenism, instrumentalism and the enhanced competitive positioning of the school. The socially reproduced sites we know as schools need to be sites where all forms of symbolic communication used are non-threatening, where learners and teachers feel valued and comfortable in their learning environments and are equally comfortable to change, experiment and take risks. Schools are sites in which trust and respect should form the cornerstones of all teacher–student interactions. Without this, any claim that formal education is in some way, a preparation, enactment and rehearsal for democratic citizenship is disingenuous.

Within this tentative democratic model, teachers and trainee teachers – professional learners – are conceived as active, as are the learners they work with. To engage the Student Voice within any PBE pedagogy, we maintain that it is vital to see teachers (in training or established) as work-based learners who are in need of developing successful mutual cooperation. Authentic Student Voice enables a true PBE, based upon mutual support and understanding. Teachers need to work with each other; but they need to work with learners too. Only by engaging with the Student Voice can PBE be fully situated and realised.

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28. THE INFLUENCE OF PLACE AND CULTURE ON PRACTICE-BASED LEARNING

Focus on Marae Learning

In this chapter we describe the transformation of a mainstream health education program – the Graduate Certificate in Clinical Teaching – to meet the needs of Māori health professionals who, as clinical teachers, contribute to the development of a clinically and culturally competent health workforce. Māori terms are used to highlight important concepts.

This wānanga-based program is delivered in three-day residential blocks on marae throughout New Zealand. The content is mainstream and international but the pedagogy is Māori, with Māori customs, values and traditions upheld and practised. The methods used in this course between 2000 and 2006 have formed the basis for other Māori-led health training programs.

The context for transforming this course includes the historical legacy that has delivered comprehensive, profound and enduring inequities in health outcomes for Māori and critical underrepresentation of Māori in all health professions. The intention in reforming the mainstream curriculum is to empower a critical Māori workforce into tactically useful roles within health institutions. The transformation is predicated on the influence of situating the teaching activities in a thoroughly Māori environment. We share our understandings from the journey so far and identify the extent of the influence of place and of culture on learning.

Ū ki te ako, tu tangata ai apōpō
Excel in teaching – so our learners will excel in the future

THE SETTING

Recognition of the difficulty in attracting Māori to post-entry clinical training (PECT) courses led to a commitment to fund Māori-specific courses and placements (Lawson-Te Aho, 1996). Despite a number of providers offering postgraduate "train the trainer" courses, Māori were not being drawn to clinical teaching roles. In keeping with the Māori health workforce development strategy,[i] elements identified as key to the success of adaptation of the Graduate Certificate in Clinical Teaching were (a) ensuring that Māori health workers had access to relevant knowledge and experiences in a culturally appropriate setting, and (b) establishing Māori leadership of the program. This course, developed and taught predominantly by Māori and aimed at Māori clinicians, was offered for the first time in March 2000 as a joint venture between the Christchurch College of Education and Te Ohu Rata o Aotearoa (Te ORA/the Māori Medical Practitioners Association).

For Māori, the obvious setting for a course of learning, instruction or development is a marae, where teachers and learners interact in a wānanga. Inherent to a wānanga is the view that teaching and learning are undertaken in a safe environment that nourishes each participant's mind, spirit, family, community connections and cultural beliefs. To support this pedagogy, the course is taught in blocks at a variety of urban or rural marae, with appropriate support from kaumatua (elders of the marae), teachers and colleagues. While the course has the same core content as the mainstream program, adaptations were made to secure the involvement of Māori communities and to address the needs of busy Māori clinicians from mainstream and Māori-led health provider environments.

THE FOCUS

Māori are the Indigenous people of Aotearoa/New Zealand. Today about one fifth of New Zealanders have Māori ancestry. Compared to other New Zealanders, however, Māori lag in measures of participation and outcomes in education, health, housing, economic activity and many other areas. These disparities have prompted a range of government strategies over the last quarter century. Initially these strategies focused on:

- increasing Māori participation in undergraduate education, including health
- increasing Māori graduation and retention in professions, including health
- research into Māori health disparities
- including Māori health as a topic into the undergraduate curriculum for health professionals.

The number of Māori graduates from tertiary level courses has grown rapidly over the last 25 years. Māori are now found in most areas of professional practice, and in the largest groups, such as nursing, medicine, psychology and physiotherapy, have established Māori-specific faculties within or alongside the mainstream organisations.[ii] Increasing the numbers of Māori graduates has required bridging

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programs for Māori from disadvantaged backgrounds, and supportive student, faculty and family networks. Part of the success of these support programs has been due to their grounding in Māori realities, both traditional and modern. For example, most tertiary institutes in New Zealand have on-campus marae and these often form a focal point for Māori students – a place where they can be Māori, seek solace or inspiration, and a place to hold ceremonial events or a place to host a study group.

Indigenous AND a Health Professional

Associations of Māori health professionals developed in part to address the challenge of being Māori as well as being a health professional in New Zealand – to be trained in Western hemisphere scientific traditions but also to maintain an Indigenous identity. The mores and orientation of each group can at times be antithetical to the other. One example is the Māori orientation towards the collective accounts of their ancestors, feats and lands. For many Māori, these concepts are central to everyday life and are carefully managed through the use of tikanga – a system that includes consideration of interconnected features such as distance and time, language, kinship and place. In contrast, the dominant non-Māori world view values individual endeavour and future achievement, and Pakeha (European) institutions reflect that preference. The challenge for the growing numbers of health professionals who identify as Māori is to remain faithful to both perspectives, and to establish a coherent connected practice.

Māori health professionals often practise in an environment where they are visible to other Māori practitioners, communities and patients, meeting expectations from kin that Indigenous professionals will be available to confer with. Both individual Māori and Māori-led organisations will seek out Māori professionals to take on leadership roles and to address disparity issues, from access to policy. The emergence of professional associations and faculties supports Māori health practitioners in maintaining both a cultural identity and clinical competencies. These groups have trans-discipline linkages such as Hauora.com – the Māori health workforce development organisation.[iii]

Growing numbers of Māori health workers and professionals work in community-focused vocations and many prefer to practise in their own rohe (tribal area), working with Māori patients or within Māori-led organisations. However, while cultural concordance between provider and patient is desirable, it cannot be achieved solely by increasing the number of Indigenous health practitioners. There is also a need to educate non-Indigenous practitioners in Māori health and other cultural competencies, and in the causes of ethnic health disparities.

THE STRATEGY

By situating the Graduate Certificate in Clinical Teaching – Māori on a range of urban or rural, traditional or modern marae, the participants encountered a culturally safe learning environment with access to a Māori paradigm, including

traditions, customs, values and beliefs – that is *tikanga Māori*. Operating from the marae base permits understandings about teaching and learning to be appraised and compared to tikanga Māori; to be evaluated from a cultural position of control and strength. The importance and appropriateness of this setting within Māori pedagogy is not a new concept (Pihama, Smith, Taki, & Lee, 2004). However, the deliberate use of tikanga Māori and the commitment to look to the past for methods to improve Māori achievement is gaining credence.

Traditional marae have several separate buildings, but marae built in more recent times are likely to have just one building with several parts that serve different functions. Typically, the marae was a complex that included a whare tipuna (ancestral house), wharekai (dining hall), wharepaku (ablution block) and surrounding lands. Some marae may also have a whare karakia (church), sports grounds, and housing for kaumatua and families. Traditionally, all marae belonged to kinships groups, either a whanau, hapu or iwi, and this remains true in present-day practice, although urban migration since the 1950s has seen a range of newer urban marae. Marae have been built in most universities, many other state-funded tertiary institutes and in an increasing number of high schools since the 1980s, These developments parallel the emergence of Māori language nests (kohanga reo), and Māori immersion schools (kura kaupapa Māori) .

Teaching and learning must begin with understanding of students' strengths, and for Māori that begins with a familiar reference point, such as nga wa o mua (literally "the days in front of us"). This phrase refers to the past, which is a characteristic of the Māori world view. In practical terms, this sees each learning episode at a marae initiated with formal or informal welcoming ceremonies, karakia (prayers) and the like. In keeping with Māori views, individual and group skills are identified and promoted, and intergenerational and intragenerational learning encouraged.

Moreover, teachers and learners have the benefit of safeguards that are followed to ensure that the marae is used appropriately as a centre for learning. These include formal welcomes and rituals of encounter, prayers and incantations suitable for each activity, acknowledgements of others, departure rituals, and separation of sacred and profane activities. For Māori, great importance is attached to starting the engagement process from a familiar point of reference. In the first instance, and especially in a marae setting, this occurs through the rituals associated with meeting, the removal of tapu (state of spiritual sacredness, restriction) and the removal of space between of hosts and guests. These rituals define the first task for any hui (meeting), and little can be accomplished before they are completed satisfactorily. The process of confirming one's connections to immediate ancestors and to those long past, to the environment and to one another underpins all teaching and learning activities. The marae, then, is more than a place but also a "process" and a world view that dictates the way in which people interact. This includes managing disagreements between those participating in discussion, through to course evaluation, to the participants' presentation of final coursework to the local community (Te Roopu Tangata, 2000).

For most New Zealanders, and Māori especially, marae-based educational activities are not unusual. Marae have long served as the centre of life for Māori communities, fulfilling a myriad of functions, for example as a place of residence, a farm, a pharmacy, a birthing centre, a funeral home, and a concert hall. Marae remain a central feature of Māori life even after migration to other places for employment. Both rural and urban marae continue to play an important organising function for community life, for social cohesion and social learning, as places of spiritual learning and as functional political units of Māori society. Rural marae are associated with kinship groups, but all marae have a role in drawing on collective knowledge to nurture community members as they grow into valued leadership roles.

As already noted, in a Māori paradigm, students and teachers have interconnected interchangeable and complementary roles. The Māori word "ako" denotes both teaching and learning, reflecting the roles that we each have as a learner and a teacher. This notion also implies that we each have a responsibility to accept knowledge passed to us and, at the appropriate time, to pass on that knowledge to others. The marae environment reflects this interplay of complementary roles and reciprocity when kaumatua take part in teaching by making presentations on the history of the marae and its ancestors, tikanga (local customs, beliefs and practices), and their own area of expertise. This is also seen when students present project work to the local people of the marae for discussion and invite them to take part in all teaching sessions.

Strengths-Based Learning

Much is made of the strengths that each student and each teacher bring to the course, because they provide the base upon which new learning is built. The marae environment acts as a facilitator for this approach by providing:

− celebrated role models, both past and current
− a safe environment for students to reflect upon current and future goals
− recognition of each student's skills in important dimensions (spiritual, family, cultural, clinical, etc.)
− a cultural context for reciprocity of learning and teaching.

A vital characteristic of Māori learning is the passing of knowledge from one generation to the next, and the associated responsibility that older children have for their younger siblings, nephews and nieces. This is reflected in the common poutama design that reflects the ascent to knowledge. Another manifestation of this characteristic may be seen in the continuum from novice to expert that guides the organisation of groups. Māori expect younger community members to participate and seek knowledge of the things that are important and need protection (customs, traditions, language, songs, chants, prayers, food preparations, marae events, etc.).

The Community Connection

A whole-person approach is essential when teaching Māori, that includes consideration of spiritual, family, community and cultural dimensions alongside learning tasks. The marae environment supports this approach in several ways. First, the marae is inherently a community-focused entity with activities such as cleaning, cooking, sleeping and eating being undertaken with fellow students, teachers and local people. Second, the rhythms of everyday activities and community events are incorporated into the teaching and learning, thereby ensuring a relationship between the learning tasks and the wellbeing of the community. For example, teachers can "shift gears" to ensure that learning continues when more important events like a tangihanga (funeral) displace the wānanga. Third, the diverse spiritual and cultural views of each person are treasured and encouraged. Participants may come from different tribal areas, each with its own customs.

Māori value group activities highly, placing emphasis on consensus and common goals. That does not mean, however, that the collective subsumes gifted individuals or that individuals are discouraged from gaining knowledge and skills. A Māori community expects that talented individuals will pursue their strengths and use them to the betterment of the whole community. Thus, at any marae it is possible to see symbols of group unity and individual accomplishment, such as carvings or graphic representations of esteemed ancestors and mythical beings adorning the inside and the front of meeting houses. Similarly, many names of buildings signify important community events or persons. The buildings themselves, which represent collective endeavour and a community point of focus, are often symbolic representations of the ancestor.

CHALLENGES FACED

Today Māori comprise more than 75% of the population in some areas of New Zealand/Aotearoa, and at least 5% of the population in every region. Typically, areas with a greater proportion of Māori show greater overall deprivation, as Māori still lag in most measures of participation and wellbeing.

The 1980s and 1990s saw a growing realisation that a large part of ethnic health disparities occurred as a result of practitioner behaviours. This led to the inclusion of a requirement for registration authorities to set standards for cultural competence in the Health Practitioners Competence Assurance Act (2003). The need to face the problem of differential provision of health care on the basis of ethnicity or culture resulted in a range of training options supported by resources and standards from regulatory authorities or professional bodies.

A corresponding (and fundamentally tactical) challenge for Aotearoa/New Zealand has been to increase the number of Māori health professionals in clinical teaching roles at undergraduate and postgraduate levels. Despite an expanding Māori health workforce, existing clinical education training program had not attracted eligible Māori health professionals.

Both Māori and non-Māori professionals are needed as teachers of undergraduate, postgraduate and vocational training programs. Leaders in Māori health professional organisations have also risen to the challenge of providing training in Māori health for the wider non-Māori health workforce. If a program to train Indigenous health professionals to become clinical teachers is to be successful, the challenge from a Māori perspective is to make the course relevant, accessible and valued. To address this we considered the safety inherent in tikanga Māori, when participants are put at ease by the inclusion of Māori faculty using familiar timing, places and methods for teaching.

CRITICAL REFLECTIONS

The marae is turangawaewae – literally a place to stand. Delivering a course on the marae is a powerful endorsement of Māori custom and Māori world-views. When this happens, Māori expect that local customs and values and traditions will be upheld and practised. The importance of aligning course philosophy with delivery methods and of teaching generic skills to enable graduates to practise in vocational environments has long been recognised. There has been widespread acceptance of integrated curricula (e.g. integrating content from anatomy, physiology and pathology) and of problem-based curricula (presenting clinical scenarios, real-life problems, problem-solving tasks). Such curricula challenge the way content is organised, how it is delivered, and how learning is assessed. There has been much less attempt to date to deliver a Māori curriculum in health. As this case study illustrates, ongoing initiatives to deliver such a curriculum must acknowledge that the underlying teaching content, processes and values, and, most importantly, the place where that curriculum is delivered, have to be different from much that has gone before.

As Māori have gained greater participation in health training, tertiary education, and professions' health policy, Māori have also sought to participate in setting standards of competence and postgraduate training. One way to retain a cultural identity while also providing professional training opportunities for Indigenous health professionals is to use the marae as a place to learn. We have described a program for clinical teachers that uses the marae as a culturally appropriate place to learn for Indigenous health workers and professionals (Jansen, Jansen, Sheehan, & Tapsell, 2002; Sheehan, Jansen, Ruka, & Crengle, 2004). Not only have course participants taken on leadership roles across the health sector, but the methods described have been refined and incorporated into other programs. This setting, the associated customs and practices and the pedagogy that underpin this approach have been used for over a decade and have formed the basis for in other successful postgraduate training programs since 2000.

NOTES

[i]   Māori Health Reference Group of the Clinical Training Agency (1999 & 2000).

ii Examples include the Māori Advisory group of the Royal Australasian College of Surgeons and Te
    Akoranga a Maui (the Māori faculty of the Royal NZ College of General Practitioners).
iii See www.hauora.com – a national initiative of "Māori led health professional organisations."

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29. PROFESSIONAL LEARNING ON AN INITIAL TEACHER EDUCATION PROGRAM

The Virtual Schools Project

THE SETTING

This chapter reports on a curriculum initiative which was implemented within secondary initial teacher education (ITE) programs in a university department of education of an inner-city area of London, England. The training programs are for pre-service students intending to teach pupils aged from 11 to 16 years and are of one year's duration. These programs are embarked upon after successful completion of a subject specialist undergraduate degree. Partnership requirements for all ITE in England mean that the courses must include both university- and school-based elements, and in fact, students spend the majority of their time in their placement schools. University-based provision is structured around subject studies and professional studies.

This project was initiated and developed while I was Director of Initial Teacher Education at the university. A workspace (wiki) hosted by the US company "PBworks," was the online platform used as part of a blended learning approach to promote problem-based learning in the professional studies element of the programs. The project involved student teachers, academic tutors and also secondary school teachers who worked within partnership schools.

THE FOCUS

The project aimed to accelerate the professional learning of student teachers, using the affordances of Web 2.0 technologies. The initiative sought to encourage cross-curricular communication and engage trainees more actively in professional studies issues.

Students on the program come from very diverse backgrounds; a number had not been educated in the UK, and on program they all experienced placements in at least two different secondary schools. These schools were drawn from the university's partnership schools, which were mainly based in the capital city. Partnership schools differed greatly, with implications for the equality of training opportunities for students on placement. Students could, for example, be placed in single sex, selective, inner city, suburban, local authority or foundation schools and academies. This curriculum initiative sought to ensure that, before they went into their placement schools, all students had engaged with issues such as working

effectively with pupils with English as an additional language (EAL), pupils with special educational needs, and transition from primary to secondary education, regardless of the experience they were likely to have in their future placement schools.

These issues had, in the past, been tackled through traditional lecture-based and sometimes enquiry-based learning in professional studies courses. These learning modes had contributed to the professional learning for many of the students concerned. With this initiative, however, we wanted to test whether collaborative problem-based learning was enhanced in the online environment and in the context of the Virtual Schools Project, and whether this context, an "approximation of practice" (Grossman, Hammerness, & McDonald, 2009), could help lead to accelerated professional learning by students and induction into their role as a teacher.

Furthermore, we wanted to discover whether modelling online collaborative learning for these future teachers would, in turn, have an impact on their practice in schools. The "anywhere, anytime" functionality of the Web and mobile technology means that, as educators, we have the opportunity to transform educational experiences for our students, and yet, although technology has been used in education for many years, it has not yet transformed teaching and learning either in schools (Becta, 2008, p. 21) or in many institutions of higher education. The UK Higher Education Funding Council (HEFCE, 2009) published a revised strategy for e-learning which challenged higher education institutions to employ technologies to enhance student learning, teaching and assessment.

Studies have confirmed that good communication, teamwork and collaboration are key skills for the workforce as a whole as well as in teaching (Hay McBer, 2000), and the project provided a context in which professional communication and language skills could be practised by students in a safe environment prior to school teaching practice.

THE STRATEGY

The strategy described in this section has evolved in each annual iteration of the Virtual Schools Project since 2007. Changes made have been based not only on the feedback given by students in evaluation forms and through focus group interviews, but also on observation of the activity and interactions by academic members of staff.

Students were allocated to Virtual School groups in the pre-course period. The groups consisted of approximately 15 students from the same program but with different subject specialisms as well as a mix of age, background, and gender. Interview records were used to ensure that groups also included a full range of abilities and aptitudes. At the pre-course face-to-face "welcome" meeting, usually 2 months prior to the start of the course, students received a briefing on the Virtual School project along with a "dummy" letter of appointment to the staff of the Virtual School for the academic year of their program. Those who were unable to attend received this information by email, following the meeting.

An online site was set up, with "pages" for each school where future teachers could make contact with each other before the program started. Those attending the face-to-face meeting went on a tour of the campus, armed with their smartphones, and subsequently uploaded photos of their visit to the site so that they became comfortable with the technology and also started to build contact and relationships with each other.

There are many companies offering wiki tools. We chose the one provided by "PBworks" for both the pre-course workspace and the on-course space. The subscription fee provides a private site which combines normal wiki functionality and virtual flip chart pages for students to write on, which can be edited by the whole community. It also provides an "Add comment" feature below each page. This comment feature, which cannot be edited by others, is familiar to users of social networking sites and serves to sequence comments in chronological order and thus aid discussion of topics and suggestions for what could go up above onto the wiki page.

Once on course, a Virtual Schools handbook was made available for the start of the program, with the key activities and deadlines. There were typically 10 Virtual School tasks, most of which were completed in the first 2 months of the program. As well, a day-long icebreaker activity, focusing on the nature of effective learning environments, was introduced on the first induction day of the program. This first day had previously consisted of many talks, distribution of course handbooks and administrative slots, often leading to a sometimes disjointed day. Each Virtual School group had to design and build a model of their school using some basic equipment provided – card, tubes, string. This led to many learning conversations and the consolidation of a sense of community within each school.

During professional studies sessions, all secondary student teachers sat with other members of their Virtual School, thus breaking down the "subject" academic tribes who, in the past, used to sit together in the large tiered lecture halls used for this element of the program. Pre-, in- and post-session tasks were explored by the Virtual School staff group (student teachers) working collaboratively both face-to-face and online. Over the years, the number and length of professional studies sessions has reduced and more time has been allocated for face-to-face Virtual School staff meetings to plan, research, discuss and make decisions about how best to address issues.

In the first week of the program, each group was given a set of background information and fictitious but realistic data on their "school" from which to draw some conclusions and frame some initial thoughts about the type of school in which they were "working" and what the priorities for the school might be. Each school had a different profile in terms of status, socioeconomic background, standardised test data and examination results. Each Virtual School was linked to a real partner school. Three on-site visits early in Term 1, the first in week one, were arranged so that students could see a real school in action and discuss some of the issues they were facing as a Virtual School.

Tutors used contributions from the site to feed into sessions either directly or indirectly. An example was in the EAL activity, completed prior to the taught

session on EAL. Students watched a TV program and were told that one of the children profiled in the program was starting at their school in a week's time. They had to work together to suggest how they would integrate the child into their school, ensure that the child accessed learning, and developed the child's English language skills. The design of the activity allowed some students to demonstrate, through contributions on the workspace, a high level of understanding of social and cultural diversity. The best contributions saw students approaching the activity by seeing the child as a member of a wider group, involving parents and school friends.

The tutor leading the subsequent taught session had an opportunity to read the ideas and plan her session around the evidence provided by contributions. She also provided feedback for each school in role as an advisory teacher. Through work on the Virtual Schools activities, the needs of individual students and groups of students could be identified and interventions could be made to address these needs.

CHALLENGES FACED

A common issue for secondary ITE providers is that secondary trainees value their specialist subject sessions highly, sometimes viewing the professional studies sessions as a less important and less relevant part of their training. Trainee evaluations in the years preceding the introduction of the project routinely revealed that subject sessions were more highly rated than professional studies ones, despite all efforts to quality assure the professional studies program and entrust delivery of the sessions to experienced and effective teacher educators or to external speakers, usually from schools with expertise in specific aspects of the curriculum. The mixing of subject groups into teams or schools seemed to have successfully addressed this problem, as cross-curricular learning, communication and friendships grew through the initiative.

Effective team building in a short timeframe and on an intensive program was problematic. The early feedback revealed the need for more contact, and team-building and familiarisation activities before they embarked on the formal tasks. This led to us offering an opportunity for pre-course contact and an icebreaker activity on the induction day, as described above. These worked well, but those joining the course just before the program started or shortly after the start felt disoriented by joining already established groups. Nevertheless, the start of the program received far higher satisfaction ratings through the immediate launch into activities, as it seemed that students "forgot" some of the more tiresome aspects of induction procedures such as form filling. This positivity lasted well into the program.

Professional studies sessions with up to 250 students took place in large tiered rooms where it was difficult to incorporate meaningful group work and structured interaction, as the teaching environment militated against this style of teaching. Sitting Virtual Schools together facilitated regular face-to-face contact between group members and meant that discussions and in-session activities had

the potential to contribute to their online Virtual School pages. Large group sizes have been reported to negatively affect student satisfaction, but the project demonstrated that good quality learning can take place despite the size (Gibbs, 2010, p. 21).

Once a team had been created, maintaining cohesive and productive relationships became problematic for some groups. There were conflicts, especially in groups containing strong personalities. Occasional interventions were necessary, and there were uncomfortable times for some students who found it difficult to deal with conflict or dominant individuals within the group. On the whole, groups found ways of dealing with problems in order to complete tasks on time.

The size of each Virtual School increased as overall target numbers grew. Although we aimed to have 15 in each school, on occasions the size was closer to 20, which led to frustrations in decision making and in allocation of tasks. We were obliged to increase the number of Virtual Schools beyond 15 groups because of practical management problems associated with arranging visits to a large number of partner schools and on-site rooming constraints. We also wanted each school to have representation from students from each subject area offered in our provision, including those with lower target numbers such as music and religious education, so that students gained an insight into the contribution of different subjects. This decision was contested by feedback that groups should be kept smaller so that everyone had more chance to participate.

Inevitable imbalances in the amount of work done by different team members in the less cohesive groups caused some friction; some students stopped contributing when they realised that the work did not "count" in assessment terms in the first 2 years of the initiative. Our research in the first years of the project led us to believe that the project was contributing to accelerated induction into the role of the teacher for those who were actively participating, and as a result we decided to make involvement count in terms of assessment. A self-review task was the assessment tool introduced to ensure that everyone contributed. This was successful to a certain extent but there was a noticeable surge in traffic to the site in the days preceding submission of the self-review, indicating that although there were still those who were committed to the project, contributing regularly over the 10 weeks, there were others who would put in minimal amounts of work and who posted at the last minute simply to pass.

Some of the lack of participation could also be attributed to anxiety. Despite a determined effort by tutors to reassure students and point out that work on a wiki could always be restored to a previous version, a few students in a focus group spoke of anxiety about making mistakes in a "public" space (e.g. deleting other people's work, making formatting or technical mistakes, accidentally offending another person) and more importantly about the fear of being judged by other students and also by tutors. It was interesting to note that there was a correlation between willingness to "have a go" on the workspace without fear of criticism and achievement of high grades at the end of the program.

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A further challenge was students' lack of familiarity with Web 2.0 for learning. Although use of Web 2.0 tools such as social networking sites is high among students, very few had prior experience of using it productively for study purposes. This was despite the fact that students born after 1982 (most of the students in this project) had never known life without the internet. One would anticipate, therefore, that these "digital natives" would engage fully in online workspaces which offered the interactivity and collaboration which they used in their social lives.

CRITICAL REFLECTIONS

In terms of benefit to the institution, the Virtual Schools Project has been recognised by external examiners, periodic reviewers and Ofsted (the Office for Standards in Education, Children's Services and Skills) inspectors as an innovative aspect of the secondary teacher training programs at the university. In 2008, the Project contributed to our maintaining a Grade 1 (Outstanding) for teacher training provision. The Ofsted inspection report (2008, paragraph 1) stated:

> There are many innovative aspects to the programme. For example, an on-line "virtual school" provides a stimulating framework within which trainees, in mixed subject groups, can discuss and explore how educational theories and subject issues might play out in practice.

The project has been disseminated to colleagues internally within the school, the partnership, and other colleagues within the university, as well as to external audiences at various national conferences such as BERA, ESCalate, FACE and TEAN), thus contributing to a raised profile for the institution. Ideas have been shared with others who have adapted them for their own contexts. The willingness of partnership schools to be involved in the development of the activities, to host visits and to give feedback to the students has shown that the project was held in high esteem by colleagues.

The feedback from students has been generally positive. A year ago I received an email from a student teacher from the first year of the project in 2007 to inform me that she had gained promotion on the basis of her experiences in the Virtual Schools Project. She claimed that the project "gave her a head start" in seeing the potential of technology in learning and also through the tasks helped her to "foresee the expectations and the challenges of the workplace."

In the review of our secondary programs in 2007, the secondary tutor team had identified the need to embed the core professional studies sessions in the trainees' learning by increasing engagement with issues covered. In 2007, as creator of this initiative, I conceived the project as a short-term induction initiative using a wiki as a jotting pad for ideas and comments about the importance and contribution of trainees' specialist subjects to the secondary school curriculum. Instead, all Virtual School groups adopted the role of a staff group addressing the parents, carers and pupils of their Virtual Schools. It became clear from the first week that the participants were engaging in the project as a form of role play. The importance of

the context for the activity seemed to be important. As one student stated in an interview:

> The word "school" throws you into it. It has an impact. I think it's very clever. It's not just a forum. It's a school.

This was further investigated in the focus group interviews which were carried out throughout the year. A combination of epistemic play (what does this object, i.e. the wiki, do?) and ludic play (what can I do with this object?) seemed to be occurring on the wiki pages. In childhood, play has an important role in helping children transfer from pre-school settings to primary schools. In some parallel senses, this project can be seen as facilitating the transition from student to teacher.

From one blank virtual sheet of paper (the blank wiki page set up for each school), the participants created a space for their schools via pretend school Web pages. Behind this front page sat hyperlinked pages with information about their school, their staff and their community. For each of the Virtual Schools, hours of self-generated "un-assessed" work had been discussed, developed and posted, with no prompting from tutors. The trainees were thinking and acting in role as teachers in a pretend school and were developing collaboratively the language of the professionals they were training to become.

It became clear that the project could also be a vehicle for adding coherence to the professional studies program, enabling trainees to see how different elements of the course linked together. More importantly, the student engagement in all the themes and issues raised through the project improved, as evidenced by the work completed on the workspace.

Findings from evaluation of the project suggested that individual and communal professional learning had taken place in the blended problem-based learning context and that the communal element had enhanced the individual learning. It became apparent that for some trainees, professional learning and induction into the teaching profession had been accelerated. One student remarked:

> It just introduces you to what a real work environment is about and how you have to be an effective team member to get on with everybody else. I personally think it was a very effective induction before we were sent on our placement because we learnt. I wasn't educated here. I didn't really know what schools were like in this country, so for me it gave an overall picture of how schools functioned.

The findings from focus group interviews indicated that dialogue, understanding and friendships across subject groups had increased since this project began. Trainees commented that they have adopted teaching ideas and strategies from trainees in other subjects which could be adapted for their own subjects. The trainees also had access to a wider, more considered and better researched range of ideas than would have been possible if these activities had been set as classroom discussions with a verbal plenary from a selection of participants at the end of the

taught session. There is also a permanent online record of these discussions to which trainees can refer whenever they wish throughout their course.

The EAL activity in particular seemed to encourage trainees to take responsibility for making decisions which they would not have been able to do in a real school at that stage of their teaching career. Several trainees described the environment as a "safe place" in which to test their ideas and, through discussion with peers, appreciate strategies that could be applied across different areas of the curriculum.

Apart from having a discernible impact on their learning, the planned activities and interactions within the Virtual School staff groups were designed to give trainees enhanced opportunities to meet many of the standards for gaining qualified teacher status in England and to give opportunities to demonstrate team leadership and decision-making skills in "pretend" management situations. The majority of trainees reported that participating in the Virtual Schools activities generated a lot of evidence that could be used in their assessment against the professional standards for teaching and also gave them an opportunity to demonstrate leadership and effective teamwork, as we had shifted teacher education "from a curriculum organized by knowledge domains to a curriculum organized around practices of the profession" (Grossman et al., 2009). They were also able to cite concrete evidence of their skills used within a professional context in job applications and job interviews.

The aim of increasing the student use of new technologies for learning with pupils in school proved to be the most challenging area in which to achieve progress. Ertmer et al. (2011) found that students were familiar with social networking tools, but they warned against assuming that students would automatically find these tools easy to use or, indeed, attractive and enjoyable. In their international project involving over 350 pre-service student teachers, few had previous experience of using these tools for learning. Learning using a wiki did not seem in itself to lead to extensive use by students in the classroom. In 2010 an additional task was introduced to the project: to evaluate a range of new technologies and to also create a plan for a learning activity which involved pupil use of at least one new technology. In preparation, students were introduced to a wider range of technologies and flip cameras and MP3 recorders were loaned to each school.

Once they went into school, we saw an increased use of these technologies by our students. Moreover, we noted that students were influencing their school-based mentors to adopt the tools, not only for their pupils' learning but also for their professional use. One whole school and another school department set up micro-blogging areas for staff communication, having seen our trainees benefitting from this technology.

Trainees were surveyed at the end of their 2010-11 program to find out if their experience had led to greater use of technology with pupils. Of the entire cohort, 59% reported that they had used new technologies with their classes. Among the 41% who had not, several explained that some schools would not allow them to use other technologies because of e-safety concerns. These figures compare well

with research data reported by Crook and Harrison (2008, p. 5), in which a far smaller number of practising teachers claimed to be using Web 2.0 tools with pupils.

The Virtual Schools initiative has gone some way to overcoming the problem of relative lack of status for the professional studies component of the programs. The majority of students have acknowledged the contribution the project has made to their learning, albeit not all the experiences may have been comfortable. There has also been an increased appreciation of the role of new technologies in learning. However, participation and engagement levels have shown some unevenness despite the introduction of an assessed element. Maltby and Mackie (2009) considered that motivational, affective and cognitive factors might explain why some students participate more than others. They claimed that anxiety, loss of control, risk adversity and an "unwillingness to jettison old (successful) learning habits" might explain lack of participation. The majority of our students have responded to the opportunity for participatory and collaborative learning and this appears to have fed forward into their immediate work in schools. We remain hopeful that it will do so in the long term.

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SECTION 3: PRACTICE-BASED EDUCATION

REALISATIONS

JOY HIGGS AND ALISON GATES

30. REALISING EXEMPLARY
PRACTICE-BASED EDUCATION

In this chapter we address the two key questions posed by this book: How can we realise, understand and conceptualise what is exemplary practice-based education (PBE)? How can our understanding of PBE be realised, enacted or put into practice? Broadly the authors of this book have been addressing one or both of these questions. In reality they have asked and answered a number of related questions that lead us in this chapter to a set of answers and interpretations that help us realise and provide the collective authors' guidance for implementing exemplary practice-based education. Figure 30.1 provides a framework of inquiry that shapes our response. Indented quotes throughout are extracts from previous chapters.
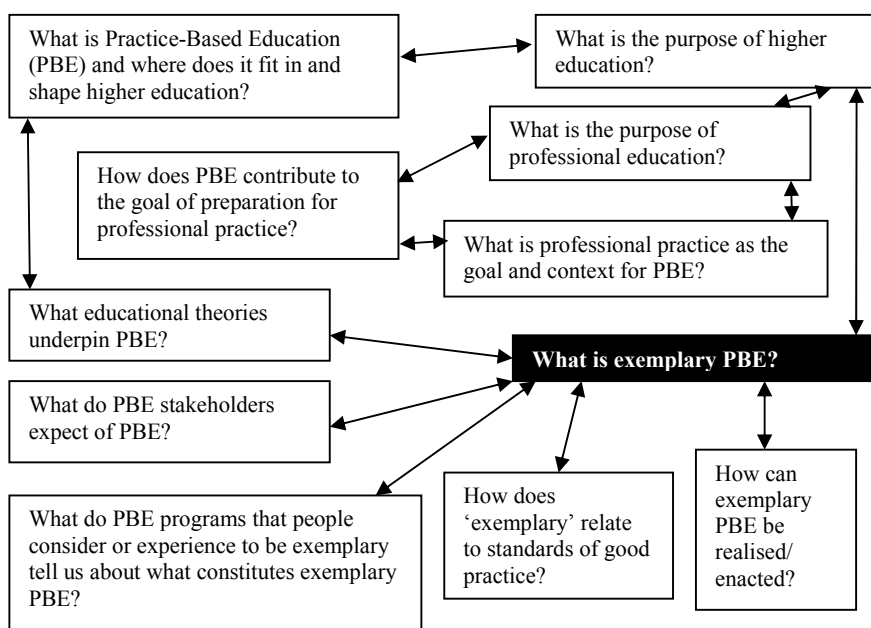

Figure 30.1. Questions pathway

HIGHER, PROFESSIONAL AND PRACTICE-BASED EDUCATION

PBE as discussed in this book occurs within two key contexts a) higher or university education and b) professional education.

Higher Education

In Chapter 2 higher education through universities is presented as aiming to:

− go beyond the development of knowledge and skills to develop (for/with students) "a life of rich significance" (after Dewey 1916/1966)
− provide education for an economically viable workforce and education that develops ethically engaged citizens
− consider professional education within the totality of a lived life
− educate for the greater/common good as well as for individual benefit and development.

Professional Education

A key theme in this book is the way PBE provides a relevant and effective means of realising professional education, meaning the education of university students for their professional practice or educating professional practitioners. The focus is on professional entry education, however, the place of PBE in continuing and postgraduate professional education is recognised and valued.

> Shulman (2004) summarised well … the challenges of professional education in preparing graduates who know, apply, think, render judgement and are able to manage the uncertainty of practice. … It is learning for practice and learning from experience that makes all the difference in professional education. (Jensen & Purtilo, Chapter 7)

PBE

> 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. (Sheehan & Higgs, Chapter 2)

… 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. (Higgs, Chapter 1)

As a pedagogic practice, we can understand PBE as comprising normative and relational elements and, as such, teacher learning fits well within a PBE paradigm. We assert that teachers' professional learning is complex and sophisticated. (Kidd & Czerniawski, Chapter 27)

STAKEHOLDERS AND EXPECTATIONS

In each layered context – in university education generally, in professional education, and in curricula based on PBE – stakeholders set considerable expectations of what curricula should deliver and what graduates should achieve. This position is exemplified in the following extract.

Good PBE, … (is) 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). (Higgs, Chapter 1)

University graduates are expected to be knowledgeable, reflective and competent in their disciplinary fields and to demonstrate a range of generic attributes including communication and interpersonal abilities, thinking and problem solving skills, attitudes and capabilities around critical self-appraisal and the pursuit of ongoing currency and quality in their practices.

Recognising the needs of society: A vital group of stakeholders is represented both conceptually and in reality by the term "society". The following quote emphasises the importance of professional education having the goal of contributing to the wellbeing and advancement of society.

Nations in the 21st century are becoming increasingly multiethnic and multicultural, with a high degree of mobility and aging populations. Europe,

for instance, has the highest proportion of old people in the world. These trends carry implications for the organisation, delivery and cost of health and social care, thereby putting practising professionals under increasing pressure to respond to more complex problems. It requires interprofessional competence to respond effectively and to realise the ideals of holistic care and treatment. Taking a holistic approach to patients necessitates the use of such tools as problem solving and critical thinking. This means that professions in health and social care need to define new roles and create new cultural patterns to ensure patient/client-centred care and to strengthen the clinical pathway. Collaboration between professions is especially important in rural and remote areas, where the available health care resources are often relatively scarcer than in urban areas (Faresjö, 2006). (Wilhelmsson, Chapter 13)

Professionalism and professional capabilities are key dimensions of professional and practice-based education and are portrayed through the notion and commitment towards service and duty of care towards others seen in the following extracts.

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. (Higgs, Chapter 1)

Preparation for practice: Stakeholders have expectations of curricula as well as of the graduates. This includes providing relevant preparation for the practice roles and worlds the graduates will enter. We see this in the words of Jensen and Purtilo (in Chapter 7) who pose the challenging question "How can educators prepare learners for such human circumstances?" to recognise how much is demanded of professional graduates providing human services and also how much is demanded of the educators whose role it is to ensure students' preparation for practice.

Practice-based learning must offer experiences that equip learners with the capacity to cope with the complex and diverse nature of practice with its many, often conflicting priorities and unpredictable outcomes. (Baldry Currens & Coyle, Chapter 8)

PBE supports the development of sensitive, flexible and client-centred professionals who are able to apply metacognitive strategies across the rich tapestry of clinical challenges. (Baldry Currens & Coyle, Chapter 8)

Since the core goal of PBE is to prepare graduates for practice, its foundation goal is to enable students to develop the capabilities and professional identity relevant to their profession. It is important to note here that we are emphasising capability not just knowledge and technical competencies. This includes the capacity to make decisions and act both professionally and soundly in situations of complexity, uncertainty and unfamiliarity. Professional capability requires confidence, critical

self-evaluation, skilled judgement and recognition of when help is needed. Technical ability and scientific knowledge is the starting point not the epitome of capability. A key part of capability is also the recognition of the need for and the active career-long pursuit of ongoing self-evaluation and learning. Thus, PBE needs to help learners become capable and active self-directed learners as well as practitioners in their field. We would want this lifelong learning to be both a conscious and committed choice as well as a habitual, almost unconscious practice.

> When it comes to facilitating the development of clinical reasoning abilities in our students we need to remember that this ability needs development across one's professional career. … When one asks therapists what draws them into clinical residency programs they often express frustration about entry-level training and short continuing education courses that focus more on technical skills, and express a desire for development of stronger reasoning and decision-making abilities. (Christensen et al., Chapter 14)

> As a profession, we are also challenged by thinking that is too often focused on the analytical – the dominant pattern – where thinking, things, and events are somewhat detached from everyday life as we look only for general patterns of cause and effect. We know that understanding the context and lived experience of the patient ("reading" the patient) is critical in designing successful physical therapy interventions. This understanding of context relies not only on analytical skills but also on the development of the narrative, where significance is found in understanding the context of meaningful interaction (Bruner, 1990). … The continuing ability to build new clinical knowledge and develop deeper understandings of practice needs to be intentional and lifelong. (Christensen et al., Chapter 14)

The notion of *professional identity* has clear expectations that the graduate will understand and relate to what it means to be a member of their profession. But they also need to realise and deliver on what it means to be a professional. This term recognises the role of professions in service of society; on top of our previous discussion of university graduates being expected to be global citizens contributing to their society, professionals need to act professionally towards their clients and embody ethical principles such as duty of care. Previous chapters have articulated how PBE provides spaces for the exploration and development of students' professional identity, a key part of which is the evolution of self, alongside the process of becoming a professional. Exemplary PBE probes at and facilitates the formation of professional identity through:

– fostering human characteristics that are lifewide (such as wisdom, dignity, courage and humanity)
– engaging students in a journey of becoming
– coming to realise the responsibilities and inherent complexities that constitute ethical, professional practice

‒ recognising that the formation of professional identity extends beyond university education and providing scaffolding (through the development of lifelong learning aspirations and abilities for ongoing professional identity and capability development.

Through reflection, experience and dialogue in education, students can develop an awareness of who they are and of their individual strengths and abilities, cares and concerns, sensitivities and fears. A professional identity, a particular way of being a professional, is never fixed; it changes through professional life in a dialectic interchange with lifeworld experience (Dall'Alba, 2009). Despite postmodern doubt, this fluid self is anchored by some core sense of "who I am": a self-sameness that infuses becoming with continuity over time to develop a narrative sense of one's self (Ricœur, 1984/1990). (Webster-Wright & Higgs, Chapter 4)

Institutions and communities have the potential to help or hinder student professionals' moral progress and to facilitate or compromise the development of ethical practice and professional virtues or moral dispositions … The context of learning for ethical practice is multi-faceted and complex, comprising early socialisation and both formal and informal learning activities. It is not, therefore, the responsibility of lecturers or teachers only; preparation for ethical practice is everybody's business. (Gallagher, Chapter 21)

The haphazard and context-bound nature of learning situations is characteristic of work-based learning, and can also be perceived positively as manifesting the richness of practice-based learning (Collin, Paloniemi, Virtanen, & Eteläpelto, 2008). Seeing and experiencing authentic working life developed the residents' professional identity and their ability to respond to the challenges encountered in working-life situations. (Ruoaranen et al., Chapter 10)

Lifelong and lifewide learning both contribute to the development of graduate and professional capabilities. As students are educated for practice, they progress along a journey of becoming. This becoming is related to the formation of professional identity but in becoming professionals they are also becoming themselves. For young school leavers, they are simultaneously becoming adults but this (professional) identity formation is more than a developmental coincidence because it occurs in different forms with mature age and postgraduate students as well. In terms of *becoming*, as the student forms a professional identity, the emerging professional identity merges with and moulds the formation of self identity, reflecting the process of lifewide, transformative personal development.

The need to support *lifelong* learning has become firmly established in higher education over the past 30 years. … how such learning for an unknown and uncertain future can best be supported through PBE is the subject of

considerable current research (e.g. Billett, 2010; Higgs et al., 2010). … The notion of learning from life in a broader sense is not so widely established in higher education. … (this concept has) been embraced within professional education to refer to the value of extra-curricular activities as well as the involvement in activities integrated into the curriculum that support students' individual interests, such as service-oriented or creative ventures (e.g. Butin, 2005; Barnett, 2011; Jackson, 2011). (Webster-Wright & Higgs, Chapter 4)

In this chapter we step through and then beyond professional entry education and the preparation of beginning practitioners to examine the way lifelong practice-based education can enable individuals to become wise practitioners and help educators and mentors to foster practice wisdom in their students and colleagues. We believe that wisdom has been overlooked and undervalued within higher education for some time. Within the university wisdom has lost territory to knowledge and, because of its nature as individualistic, situational and personal, it has been in the "too hard basket" with university educators. We consider that research on practice wisdom from a variety of disciplines would benefit from a return to its roots in the scholarship of wisdom more broadly. Practice-based education (PBE), when it extends to lifelong and lifewide learning, is conceptualised as a bridge to wise becoming. (Gates & Higgs, Chapter 5)

Plato, Aristotle and others introduced the notion of courage as a virtue or character trait that protects the other virtues at their testing point, equating courage with bravery or fortitude. This inner resource stands ready to come into play on behalf of learners, each of whom will need to learn new areas of competence and to learn what care/service, compassion or fairness really requires in the individual situation. The idea that successful professionals must have the courage to learn – and continue to learn – throughout their lifetime must be instilled early in the educational process. (Jensen & Purtilo, Chapter 7)

University curricula and standards go hand in hand. Expectations for curricula, staff and graduates to achieve standards come from the graduates themselves, professions, employers, universities, accrediting bodies, regulatory agencies and society in general.

Professional schools are generally found in university settings where emphasis is on professional preparation led by faculty who must function and adhere to the standards of a university academic setting. (Jensen & Purtilo, Chapter 7)

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. (Higgs, Chapter 1)

EXPERIENCING EXEMPLARY PBE: EDUCATORS AND LEARNERS

In Section Two of the book we asked educators to write about their experiences and their colleagues' and students' experiences of exemplary PBE. This was in pursuit of three goals a) to bring PBE alive through real practice examples, b) to ask the authors to reflect on what made their PBE exemplary and c) to consider how they dealt with the challenges they faced. In essence, we were asking them to do with their teaching, the same thing we ask our students to do in PBE: to understand their practice through doing, reflecting upon and articulating it.

Each of these Section Two accounts and reflections on exemplary PBE practice were organised around a template for showcasing innovation and capturing critical reflection. The authors considered the setting, the focus, the strategy and the challenges faced in relation to their PBE programs. The guidelines for these chapters provided a structural framework for author's critical reflection. When these case studies are read side by side and considered not as individual beacons of exemplary practice but rather as a collective wisdom, we derive an opportunity to interrogate the collectiveness of these diverse experiences.

Learners' Experiences

Royeen presents a "triangle of experience", predicated upon mentorship, interaction with practice, coupled with reflection and reflexivity as the critical, intervening set of `experiences that address the integration and synthesis essential for the habit of the art (of practice) called for by Sullivan and Rosin (2008). That is, we may not know exactly how to foster and develop integration of all three metaphorical habits (of the mind, of the hand and of the art), but we have a pretty good idea that it is the triangle of experience that allows it to grow and develop, from the student level to the expert level, over time and engagement in the activity of the practice of the profession. How much do our current academic programs truly address learning in the triangle of experience? Is that another venue for assessment of how we develop practitioners? (Royeen & Kramer, Chapter 3)

The majority of trainees reported that participating in the Virtual Schools activities generated a lot of evidence against the professional standards (for gaining qualified teacher status in England) and also gave them an opportunity to demonstrate leadership and effective team work as we had shifted 'teacher education from a curriculum organized by knowledge domains to a curriculum organized around practices of the profession' (Grossman et al., 2009). (Wright, Chapter 29)

The students work in small groups or pairs, sometimes with each other and sometimes with aged care centre staff, depending upon the circumstances. The nurse educator facilitates appropriate selection of residents and care activities to support student learning from experience, and plans learning or debriefing sessions on most days. These can be quite lively later in the semester, when up to 18 students can be in one of the two larger facilities on a single day (usually in two shifts). (Grealish & Trede, Chapter 9)

In watching the videos, students see how they move and manage equipment: "When I wear the clothes, I start to think that I am a nurse and I am going to do this; if I was wearing normal clothes it might seem less serious". They find that the images of patients' faces in different scenarios provide a sense of a real situation: "It provides an image of a real patient." (Johannesson et al., Chapter 20)

Educators' Experiences

Seeing our work as engagement with colleagues in a professional learning community also affects the ways we work with and consult with the profession. (Letts, Chapter 11)

We were particularly interested in creating an intentional opportunity for faculty in health professions programs to meet and discuss topics and pedagogies unique to teaching and learning in health professions, such as teaching and assessing clinical skills. In particular, we recognised that health professions faculty share a common, signature pedagogy, "learning in the practice settings of the workplace" (Harris, 2011, p. 43). Signature pedagogies are important because they are pervasive and define how knowledge is transmitted, analysed, criticised, accepted or discarded (Shulman, 2005, p. 54). We determined that an intensive, multi-day workshop or retreat, open to novice teachers from all of the health professions programs, would best accomplish this goal. The program we envisioned would complement existing school and program sponsored activities, draw upon the resources of the university, and enlarge our individual school efforts. In 2006, Creighton University Schools of Medicine, Nursing, and Pharmacy and Health Professions introduced the Summer Initiative for Teaching Excellence in the Health Professions, known informally as the SITE program. (Huggett & Jensen, Chapter 12)

First, the professionals brought together to teach in this innovative program share a deep commitment to issues of human rights, equity and social inclusion. This is manifest in how and what we teach, and in our professional lives and scholarship beyond the classroom. (Clancy et al., Chapter 25)

The opportunity to examine PBE through the experiences of learners and educators, permits a more embodied understanding of PBE. Viewed in this light, exemplary PBE is seen to be social, relational and experiential.

THE SOCIAL ASPECTS OF EXEMPLARY PBE

A core theme identified in reviewing the chapters in this book was the critical place of the social aspects of learning that parallel professional practice. In this conceptualisation of 'exemplary' we see that this term refers to the notion of exemplifying or typifying good PBE practice. The social aspects of learning and practice refer to the understanding that exemplary PBE incorporates and privileges the social aspects of learning and professional practice. We also see that learning through university education can be viewed as practice and a set of practices in the same way that professional practice is understood.

Schatzki (2011) identifies a key argument in practice theory: that practice can be viewed as an organised constellation of diverse people's activities. A practice can be thought of as a social phenomenon in the sense that it involves multiple people; their interests, activities and consequences. The term *professional practice* refers to "the enactment of the role of a profession or occupational group in serving or contributing to society" (Higgs, McAllister, & Whiteford, 2009, p. 108). In participating as learners at university and as novices becoming members of their profession, university students are developing their capabilities as learners and novice professionals and gaining an understanding of, and identify as, university graduates and members of their professions.

The book has explored numerous social dimensions of learning. These include the following.

Recognising and engaging students as social learners is a key aspect of PBE, particularly in workplace learning settings.

> Scaffolding to authenticate IPL experiences may be used with other strategies to develop a student-centred approach to learning. This has been associated with enhanced learning outcomes (Lea, Stephenson, & Troy, 2003). However, student-centred approaches require care as they can add a destabilising layer of complexity (Geelan, 1999), important in the complex IPL context where students are already reframing their professional identities. (Baldry Currens & Coyle, Chapter 8)

> Within this tentative democratic model, teachers and trainee teachers – professional learners – are conceived as active, as are the learners they work with. To engage the Student Voice within any PBE pedagogy, we maintain that it is vital to see teachers (in training or established) as work-based learners who are in need of developing successful mutual cooperation. Authentic Student Voice enables a true PBE, based upon mutual support and understanding. Teachers need to work with each other; but they need to work

with learners too. Only by engaging with the Student Voice can PBE be fully situated and realised. (Kidd & Czerniawski, Chapter 27)

Understanding practice and knowledge as social constructs is an important aspect of PBE for both educators and learners. To see both of these learning outcomes as socially constructed rather than absolute or received is a key driver for the way PBE is conceptualised.

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. (Sheehan & Higgs, Chapter 2)

Communities of practice (and learning communities) are widely supported as ways of understanding professional and learning practices (Egan & Jaye, 2009; Sheehan, 2011) and as ways of fostering learning and professional development.

The term communities of practice was coined by Lave and Wenger (1991) to describe a theory of social learning, one that places "learning in the context of our lived experience of participation in the world" (Wenger, 1998, p. 3) (see further discussions in Chapter 4). Underpinning this theory are four articulated premises: (i) that people are social beings, (ii) that knowledge occurs in relation to valued enterprises, (iii) that knowing results from participating and pursuing ability in these enterprises, and (iv) that learning produces meaningful knowledge. Although these premises have been critiqued and expanded they make a firm connection between social practice and learning by framing learning as social and relational participation (Hughes, Jewson, & Unwin, 2007). In acknowledging the ubiquitous nature of communities of practice, Wenger (1998) sought to overcome the "forgotten familiarity of obviousness" (p. 7) that can lead us to overlook the ongoing learning we do while working with others. (Croker et al., Chapter 6)

Explicitly preparing and supporting students to join and participate in interprofessional communities of practice and to reflect on their learning from these experiences can help them to optimise practice-based education and workplace learning experiences. When viewed through a lens of communities of practice our workplaces are replete with opportunities for learning through shared practice. Some communities of practice (such as informal work and study groups) may be self-initiated; others (such as long-term formal work groups) are well established and students join them "on the run," like cyclists entering a moving peloton. … Practice-based education that focuses on realising the capability to see and join communities of practice will enhance opportunities for lifelong learning. (Baldry Currens & Coyle, Chapter 8)

Peer learning has numerous benefits in PBE.

> Increased interactions with peers may facilitate knowledge production in socially constructed learning environments. The aspects of inferencing strategy instruction should include not only explanations of the strategies and their functions, but also modelling the use of strategies by the instructor, and guided practice of strategies matched to tasks and contexts. Learners must be made aware that to convey their ideas clearly and effectively they must use varied sentence structures and choose appropriate vocabulary for an academic audience. University students need to learn the metalanguage (rules of language) as well as vocabulary and basic communication to be effective and successful using the second language in work and practice environments. (Giridharan, Chapter 19)

Interprofessional learning exposes students to different frames of reference and experiences early in their professional career.

> When a theatre director is setting up a production, what happens if he or she decides to let the actors rehearse their roles separately and then meet one another for the first time on stage on opening night? Unfortunately, in Sweden, as in many other countries, students who are going to work together in health and social care organisations have not, for the most part, "met" one another during their education/training "rehearsals", even though they are going to act every day in the same arena with the same patients and clients. Thus, rather than having accumulated interest or gains, they, and more importantly their patients, are disadvantaged by the lack of opportunities to be educated collaboratively, interprofessionally. (Wilhelmsson Chapter 13)

Incorporating others into learning is a key aspect of PBE and preparing students for professional practice which involves, typically, working with others: clients, team members within and across different disciplines, professional peers and members of the community.

> The concept of "others" in PBE commonly – includes peer learning and interprofessional learners situated together. (Baldry Currens & Coyle, Chapter 8)

> The Student Nurse Led Ward model provides for students from third, second and first year to work collaboratively in a service unit. Senior students mentor junior students, enabling skill development in peer learning and leadership. The students work closely with clinical staff members who provide mentoring and feedback. An on-site nurse educator develops staff capacity for supervision and supports student learning through reflection and discussion. (Grealish & Trede, Chapter 9)

Partnerships were identified as key aspects of a number of the programs.

Framing school-based practicums as a reciprocal act of learning – both ways learning, as opposed to the more traditionally conceptualised unidirectional learning from school or Associate Teacher to the student teacher/teacher candidate – foregrounds that learning happens in dialogue and acknowledges that we hope associate teachers and the schools they work in also benefit from the practicum placement. We view the associate teachers and site coordinators as school-based teacher educators, valuable partners in the important work of teacher education that happens in both school and university classrooms [and beyond them]. (Letts, Chapter 11)

Teaching and learning strategies that creatively and richly used the opportunities provided by real workplaces, classrooms, educational technology and blends of these were evident throughout the cases.

This project was initiated and developed whilst I was Director of Initial Teacher Education at the university. A workspace (wiki) hosted by the US company 'pbworks,' was the online platform used as part of a blended learning approach to promote problem-based learning on the professional studies element of the programs. The project involved student teachers, academic tutors and also secondary school teachers who worked within partnership schools. … with this initiative, we wanted to test whether collaborative problem-based learning was enhanced in the online environment and in the context of the Virtual Schools project, and whether this context, an 'approximation of practice' (Grossman, Hammerness, & McDonald, 2009), can help lead to accelerated professional learning and induction into their role as a teacher. (Wright, Chapter 29)

CHALLENGES IN IMPLEMENTING PBE

Educators and learners faced a number of challenges in PBE related to the culture and norms of their university and workplace settings, developing good partnerships, reconciling diverse interests and values, learning relationships, different learner levels of success, dealing with change, logistics (particularly timetabling and timing), workload, and learning to use new teaching tools and strategies.

Professional schools are generally found in university settings where emphasis is on professional preparation led by faculty who must function and adhere to the standards of a university academic setting. Professions are well known for their focused, specialised education that is a required portal to the profession and for the tight linkages that exist between education, accreditation and licensure. (Jensen & Purtilo, Chapter 7)

Despite limited preparation to teach and serve as educational leaders, health sciences faculty must address unique structural challenges compared to other higher education settings: faculty time available for teaching is limited;

faculty preparation models emphasise research; curricula are typically integrated; multiple settings are used for teaching and learning; teaching often occurs in a clinical practice setting with actual patients; and evaluation of learning often requires performance-based assessment. (Huggett & Jensen, Chapter 12)

Establishing the model was time-intense. Collaboration requires listening, negotiating, and at times even giving in to others in order to achieve higher order aims (Trede & McEwen, 2012). Reconciling university and aged care facilities' interests was not entirely straightforward. It required many meetings and rigorous discussions. However, these led to stronger partnerships and the sustainability of this model. (Grealish & Trede, Chapter 9)

(Challenges faced in using simulations in police education include:) (i) the personal safety issues inherent in the nature of policing create restraints in the design and implementation of learning experiences for policing students, and (ii) consideration of the needs of students who choose to undertake their Session 1 studies by distance education. These students who study remotely (except for 20 days of residential on-campus classes across 6 months), while the on-campus students are exposed to simulated policing situations on a daily basis, are expected to attain similar standards of learning achievement at entry into Session 2 as their on-campus Session 1 colleagues. … simulations are employed to provide a PBE approach to the distance education study programme, the on-campus learning programme and the workplace-based study component of the ADPP. (Davies, Chapter 26)

… with this initiative, we wanted to test whether collaborative problem-based learning was enhanced in the online environment and in the context of the Virtual Schools project, and whether this context, an 'approximation of practice' (Grossman, Hammerness, & McDonald, 2009), can help lead to accelerated professional learning and induction into their role as a teacher. (Wright, Chapter 29)

This is a process that could, potentially, create a number of difficult issues. Most importantly, it implies equality in the relationship between the mentor, tutor and student teacher as dissonant practice is brought into focus. In fact, however, mentors, students and tutors have different and more or less powerful roles in relation to each other, and the extent to which participants would feel able to expose their thinking to dissonant enquiry in this context remains to be seen. Will the participants be able to establish what Cassidy et al. (2008, p. 224) saw as a requirement for joint educational enquiry, "a deepened sense of trust which facilitates critical debate", or will the current relationship imbalance prove to be an intractable problem? (Hutchinson, Chapter 22)

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The marae is turangawaewae – literally a place to stand. Delivering a course on the marae is a powerful endorsement of Māori custom and Māori world-views. When this happens, Māori expect that local customs and values and traditions will be upheld and practised. The importance of aligning course philosophy with delivery methods and of teaching generic skills to enable graduates to practise in vocational environments has long been recognised. There has been widespread acceptance of integrated curricula (e.g. integrating content from anatomy, physiology and pathology) and of problem-based curricula (presenting clinical scenarios, real-life problems, problem-solving tasks). Such curricula challenge the way content is organised, how it is delivered, and how learning is assessed. There has been much less attempt to date to deliver a Māori curriculum in health. As this case study illustrates, ongoing initiatives to deliver such a curriculum must acknowledge that the underlying teaching content, processes and values, and, most importantly, the place where that curriculum is delivered, have to be different from much that has gone before. (Jansen & Jansen, Chapter 28)

A common issue for secondary initial teacher education providers is that secondary trainees value their specialist subject sessions highly, sometimes viewing the professional studies sessions as a less important and relevant part of their training. Trainee evaluations in the years preceding the introduction of the project routinely revealed that subject sessions are more highly rated than professional studies ones, despite all efforts to quality assure the professional studies programme and entrust delivery of the sessions to experienced and effective teacher educators or to external speakers, usually from schools with expertise in specific aspects of the curriculum. The mixing of subject groups into teams or schools seems to have successfully addressed this problem as cross-curricular learning, communication and friendships grew through the initiative. (Wright, Chapter 29)

"What are the sources and nature of learning for new professionals during their early years of practice? What forces or factors influence the nature and trajectory of professional development during this time? What facilitates and constrains learning? What experiences shape the formation of professional identity for novice clinicians? How do novices change over time? Why do some therapists grow toward expertise and not others?" (Black et al., 2010, p. 1761). (Mostrom & Black, Chapter 16)

With innovation comes change and not all change is welcome. Baines and Chiarelott (2010) raised potentially problematic issues of professional partnerships that can be detrimental to program quality, institutional reputation and faculty autonomy. In the aged care setting, there is a temptation to use nursing students as extra staff, focused on service delivery rather than treating them as learners. The nurse educators were able to set up clear learning

objectives in the context of the organisation's capacity to deliver appropriate learning experiences for the students. (Grealish & Trede, Chapter 9)

We encountered four challenges to the design and implementation of the SITE program. First, we found it difficult to identify program dates that would not conflict with important events in a single school or program. Each school or program operates on a different academic calendar, including unique variations for clinical, summer school, and faculty development activities. We also found that faculty interest and availability varied by contract type, health sciences faculty being engaged for 9-month, 11-month, or 12-month contract periods. A faculty member on a 12-month contract might prefer to participate in the SITE program during the summer months, whereas a colleague with a 9-month contract would not be available during the summer period. We offered the inaugural SITE program in August, hypothesising that all faculty would be available at that time and motivated by the upcoming academic year to participate in the program. However, after the initial implementation of the program, we received feedback from current and prospective participants that August was too near the start of the new academic year. In the second and subsequent years, we offered the program in early June. This was received favourably, and participants reported that they completed the program prior to summer vacations or non-contract time. Some participants also noted that it was valuable to have the 3-month period prior to starting the academic year so that they could plan or implement their project in time for the new academic year. (Huggett & Jensen, Chapter 12)

In the design of the assessment program three major issues became clear right from the start. The first was that in such an assessment approach no single instrument can be seen as a panacea; no single instrument can do it all. Therefore a program of assessment is needed (Van der Vleuten & Schuwirth, 2005). … In programmatic views on assessment there are no good or bad instruments per se; each has its indications, side-effects and contra-indications, and should be fitted into the program where it serves its best purpose. Programmatic assessment also requires considerations at the level of combining the results of different instruments, beyond the often arbitrary decisions (examination A counts for 80% and examination B counts for 20%) made in many assessment programs, in which no clear consideration is given to how those examinations contribute to the overarching goal of the assessment program. … A second issue was that for assessment to really inform at the level of integrated competencies … A final issue was that the assessment must be meaningful and taken seriously, but must also be fair and rigorous. This is not easy to achieve; many of the notions about rigour and fairness of assessment originate from research into assessment of learning, and so new ideas had to be found. (Schuwirth et al., Chapter 15)

Finally, although student feedback about the seminars has been anecdotally positive for the most part, we have yet to develop specific measures of its overall effectiveness. Part of the problem of finding effective measures is inherent in the very nature of narrative learning, exposing what is not predictable or readily apparent, and contextually based. We continue to debate ways of measuring narrative learning, including the perceptions of clinical instructors about student performance as they transition into the clinic. (Greenfield & Swisher, Chapter 17)

The first challenge related to the teachers' workload. How could we ensure that busy teachers/doctors allocated time to adequately prepare for their teaching responsibilities? We found that transforming a case for the web was something quite different from just copying a patient history. It was easy enough to get the cases, or rather the patient documentation, but it was challenging to motivate teachers to do the necessary adaptations and to think of multimedia triggers. Most teachers were used to working with linear text and could not see the advantages of hypertext and multimedia material, which had rarely been used before. … To address this problem we ran a series of workshops and seminars about how to create motivating and challenging PBL scenarios using new media. We also prepared a guide and a script for the scenario designers to follow. As well, we decided that the scenario designer's name would be published with the scenario so that students could ask questions and give feedback directly to the person responsible. This was part of a strategy to make the scenarios more enduring and always up-to-date, which proved to be effective. Students' feedback on scenarios was also sent to the chairman of the thematic group as well as to the semester coordinator. (Persson, Chapter 18)

In Chapter 23 Smith et al., provide the following list of challenges of workplace learning:

- Integrating WPL into curricula in the context of traditional university structures
- Ensuring sufficient quantity of placements that meet the learning objectives relative to the student numbers
- Equity of access to quality workplace experiences
- Identifying and ensuring a minimum standard of education in the workplace
- Funding the costs to stakeholders of WPL
- Adequately preparing students for diverse and complex learning experiences
- Coordinating and sustaining partnerships between multiple stakeholders
- Meeting competing priorities of providing business services and educating students
- Identifying and providing educational development for supervisors to enable them to be skilled in providing WPL placements

- Ensuring adequate space and resources for students in the workplace
- Provision of support services for students e.g. accommodation
- Having sufficient empirical research to guide optimal practice of WPL
- Effectively moderating assessment
- Brokering expansion into new contexts and with non-traditional providers.

The inevitable cross-discipline miscommunication and dialogue on the management of differences that emerged from the range of professional orientations, values and perspectives meant that planning was time-consuming and lengthy, particularly the preparation of five cases to include something of "interest" to each professional. However, feedback indicated this was a positive experience for those involved and the supervisors who designed these cases learned about the other professions on the way. It was very much a capacity-building exercise. Disappointingly, from the learner feedback we learned that we did not do as much to enhance their interprofessional understanding as we had hoped. Despite this, we felt the exercise was a success as we did enhance their awareness of the issues that surround this ideal of "collaborative practice" and increased their awareness of the strengths and challenges of interprofessional practice. (Sheehan et al., Chapter 24)

The term "exemplary practice" may be contested since decisions regarding authority to judge the exemplary nature of practice, and the basis on which such judgments are made, are open to question. Its use alongside the phrase 'indigenous perspectives' becomes even more challenging, especially when the narrative voices are outside the indigenous group of interest. Cognisant of these issues, our intention in this chapter is to describe an evolving set of exemplary practices in developing indigenous perspectives in a practice-based, teacher education course. (Clancy et al., Chapter 25)

A FINAL WORD

In Chapter 1 the framework for this book was set as follows:

A number of the chapters will 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). (Higgs, Chapter 1).

Table 30.1 provides a fusion of these theoretical and practice led horizons.

Table 30.1. PBE – A theory - practice merger

Theory (See Higgs, Ch1)	Practice Derivations
– is situated within practice-relevant contexts	– is *situated* in university and professional education
– 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	– is a *socially realised* approach to education that is *experienced, enacted and evaluated* differently by different participants, providers and partners who each face the challenges in understanding, particularising (for the given context) and making PBE an achievable, exemplary and positive experience
– 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.	– addresses stakeholders *expectations* (including ethical practice) and *contributes* to society

As well as providing a view from the outside (theoretical perspectives and the expectations of society and higher education systems) this book has afforded a view of PBE from the inside. Incorporating perspectives of students, educators, learning communities, communities of practice, institutions, professions, and communities who engage with professionals in their practices, this embodied approach to PBE highlights its social, relational and transformative nature that transcends traditional curricula and fits the complex demands of the 21st century. This deep engagement with the way that PBE is understood, envisioned and experienced offers insights into both its challenges and rich opportunities.

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