Methodologies for
PRACTICE RESEARCH

CONTENTS

INTRODUCTION

This book addresses both the underlying principles of practice-based research and methodological approaches appropriate for practice-based research. It is aimed at the professional doctorate candidate, whether a generic professional doctorate, an EdD, a DBA or one of the many professional doctorates on offer. It covers the general principles of practice-based research and is not tied to a particular discipline or professional group.

The professional doctorate is not a recent phenomenon, but one which has a long history. The Doctor of Education (EdD) was offered by Harvard University in 1922 and, in the United Kingdom, the University of Bristol offered the first EdD in 1992. Since then, first in Australia and then followed by the United Kingdom, there have been a proliferation of doctoral programmes and there are now over 40 named doctoral awards. Despite the establishment of the EdD, MD (Doctor of Medicine) and DBA (Doctor of Business Administration) in the United States, it was not until 2000 that the professional doctorate intensified and since then there has been a proliferation of professional doctorate programmes, focused on particular professional groups (Zusman, 2017). Some of the programmes from Australia, United Kingdom, United States, Canada and many other countries are aimed at those preparing to enter a profession, such as the *Doctor of Clinical Psychology*, while others are focused on established professionals, for example the *Doctor of Nursing Science (DNS)* designed to prepare clinicians for advanced roles. Maxwell (2003) identified a third group, namely that of the generic or work-based professional doctorate, for example the *Doctor of Professional Studies (DProf)*, which is not tied into one profession but has a generic focus on work-based practice development.

Common to all professional doctorates is the relation to practice, and most professional doctorates require a final dissertation or thesis which details the focus and original development of an aspect of practice. Research on the impact from graduates of professional practice doctorates is beginning to reveal an alignment with the needs of communities, organisations and professions and how the graduates' research can generate a wide variety of outcomes that have an impact (Wellington, 2013; Costley and Stephenson, 2008). Their ability to transform research into action can meet the needs of employers and society, demonstrate improvements in practice and help society adapt well to the ever-increasing pace of change in the

twenty-first century (see e.g. the journal *Impacting Education: Journal of Transforming Professional Practice*, from 2016).

The relationship of the research project to practice can vary. Frayling (1993) identifies three ways in which research can relate to practice: research about practice, research into practice and research through practice. Frayling was discussing design practice, but this conceptualisation has a generic application. Research about practice would mean the researcher examining an issue which may have implications for practice and this may involve carrying out research while not being directly involved with the practice area. It has implications for practice and its findings can then be applied to practice. Research into practice involves carrying out research directly on practice actually in the practice area. Research through practice is, as it implies, using practice as the very focus of the research.

It is apposite that Frayling was in the field of arts, as professional doctorates range over many professional areas, but it is those who are historically steeped in practice, such as nursing and other healthcare roles, teaching and arts, that have led the way in many respects in demonstrating the value of research which has a strong impetus on practice.

This book explores research approaches in the context of practice-based research and as such it covers a very broad area. The focus is on research into practice and research through practice. A key argument is that there is commonality about practice and the development of that practice that transcends disciplinarity. When considering practice, there is great value in approaching research into practice and practice development in a structured and focused manner. This book aims to explore both the underlying principles and the methodological approaches which are relevant to research across the curriculum (often addressing complex, 'real-world' problems) that will ensure a careful, systematic approach.

Practice is both broad and to a degree nebulous, and it is often used in a 'cover-all' way: for example, concepts of practice can differ greatly between work environments. However, comparatively recently there has been an increasing awareness of the ways knowledge can be generated from practice. The increasing popularity of professional doctorates has been an important factor in this development whereby experienced practitioners can develop their professional work to doctoral level.

Practice research can take many forms and much depends on the focus and nature of the practice and practice area which are being explored. This book aims to explore the relevant methodological approaches which will facilitate this, not by presenting an exhaustive list, but rather by a consideration of relevant and commonly chosen approaches. What we aim to do in this book is to explore a range of options and we have purposefully drawn on examples from different disciplines and practice areas. It is also worth mentioning that often practitioners choose methodological approaches which are not valued in their particular area of practice. For example, an engineer wishing to implement a new technique might look to approaches involving human interaction and the management of change involving methods that are sometimes undervalued within a scientific discipline.

In practice-research, the 'self' is important because researchers who are also practitioners are not outside observers but are centrally involved in the research and the research process, possibly carrying out research on themselves. This requires a different skill set from more conventional research approaches (Drake and Heath, 2011).

Practice researchers and practitioner–researchers are often, but by no means exclusively, mid-career professionals, coming to the research with a wealth of experience and a variety of projects already completed. The challenge can be to develop this previous work using reliable methodical approaches that result in useful and rigorously achieved outcomes. This provides challenges for all involved and it is important that researchers position themselves within the research process, which requires a reflective and reflexive ability at a sophisticated level.

Ethical issues are also important and do require much thought as the research often constitutes what is referred to as insider knowledge and part of this is the importance of the positionality of the researcher. Additionally, many ethical committees can classify practitioner research as service improvement where formal approval is not required. However, this is not to say that there are no ethical issues involved as full consent of all involved needs to be gained. There also needs to be some thought to potential ethical problems: for example, in exploring practice, suboptimal or bad practice might be uncovered. Not only at the beginning, but also throughout the process, ethical issues need to be given some detailed consideration. When dealing with practice environments there is almost always the requirement for the co-operation of others and this presents many challenges and requires strategic management.

Acknowledgement of the transient nature of practice is often overlooked. Those in the public sector are aware of the changes in policy and funding cuts which can occur when there are government changes, and they also can happen within the lifespan of a government. This phenomenon is not exclusive to the public sector but also common in the private sector. Strategic management and many skills, often including insider knowledge, are essential in managing the process of research in tandem with changes in policy and practice.

The above discussion serves to emphasise the importance of reflexivity and the need for reflective skills for practice-based researchers. In terms of reflection on and during the research process there is a need to consider the wider contextual factors which can impede the research and for reflective ability and adaptability to alter and develop the process in consideration of the experiences of the researcher. This has important implications for the methodological approaches which are relevant to practice-based research and is a key reason why the choosing of an approach requires detailed consideration. It is also important to emphasise that choosing a methodology is not an exact science and methodological approaches are not mutually exclusive as similar elements may be present in more than one approach. It is more a question of choosing the best fit so that an approach is chosen which will shape and develop the research process in the appropriate manner.

The particulars and themes running throughout the book are around the nature of practice and how the essence of practice can be captured through a research focus. Some recurring points are the need for reflection and for the integration of reflection and often also reflexivity into the research process. Similarly the integration of ethics and ethical principles that relate to practice need to be included in the research process. The transdisciplinary nature of work and practice situations is a theme, as well as the focus of research requiring particular outcomes and recommendations for practice. Also apparent in the choice of research approach are deliberations about the advantages and considerations needed for practitioners who engage in research and have insider knowledge and ontological awareness because of their expert experience.

Although the separate chapters each address issues of practice resulting in similar themes running throughout the book, they are sometimes addressed in different ways. The aim is to explore methodological approaches which are useful ways of framing the research and which ensure rigour and consistency that allow the incorporation of the above principles.

STRUCTURE OF THE BOOK

The book is in two parts.

Part I considers the concept of practice-based research and its philosophical and theoretical underpinnings. The central idea is that there are a number of practice-orientated projects which have used research techniques to develop practice in a unique and systematic way, and there is now a need to pull together and conceptualise these ideas. For example, consideration is given to how the concept of the *Bricoleur*, espoused by Lévi-Strauss, is used to facilitate this process.

The focus is on the position of the researcher and, as such, issues around reflection and reflexivity are addressed. There are also key issues around ethical considerations and the ways in which practice-based researchers and in particular practitioner–researchers need to incorporate ethics in practice research as a strong strand.

Part II examines the methodologies which can be used as an overarching framework for the development of the research programme. These approaches are carefully chosen to reflect the common approaches which are considered by professional doctorate candidates. Each of the authors is a recognised expert in the research methodologies that are explained and discussed and each chapter incorporates real-life examples with exercises and key points.

PART I

Chapter 1 Philosophy and Practice (T. W. (Tom) Maxwell)

This chapter examines the type of knowledge involved in practice-based research and evaluates a growing body of literature examining knowledge that has been

characterised as modes 1 and 2. Mode 2 is focused on practice research and emphasises the need for transdisciplinary approaches. Mode 1 is characterised as unidisciplinary in nature and follows the rules and customs of a particular discipline. The key debates and issues are examined in some detail, including the binary that the distinction can set up and the more helpful focus on research in the 'real world' and the transdisciplinarity of more practice-based knowledges.

Chapter 2 Research Approaches in Professional Doctorates (Carol Costley)

One of the main challenges of practice-based research is the difficulty of reconciling quite different philosophical approaches. This chapter examines the claims made for an epistemology of practice in research and the challenges this brings. It considers some of the key elements associated with research that is practice based or practice led, and how such research might be at variance with more established research processes and have a different order of priorities. There are implications of complexity.

Chapter 3 Why Policy Matters Particularly in Professional Doctorates (Pam Burnard, Tatjana Dragovic, Rebecca Heaton and Barry Rogers)

Policy is the mechanism through which values are authored and formulated for society. Policy embodies carefully articulated principles for acceptance and enactment. The practices and policies necessary for resourcing professional doctorates comprise one of their defining features in that they form the background upon which researching professionals engage in shaping practice agendas, leading professional change and, in turn, changing policies. This chapter examines vertical policies that come from legislation or accreditation bodies in top-down ways as compared to or in connection with policies that are more horizontal and 'softer' in character, coming from published materials, traditions or forms of professional dialogue. It also features the accounts of two researching professionals who further illustrate how policy and policy thinking disrupt and reorder their professional doctorate projects.

Chapter 4 Reflective Models and Frameworks in Practice (Jan Fook)

This chapter aims to provide an overview of the different meanings of reflection (and related concepts) in relation to research, and to provide practical guidelines for the use of reflection in research. It discusses how reflection is related to practice-based research and, in particular, how reflection and reflexivity might themselves be used as an approach. Practical examples of specific questions to aid reflection are provided.

Chapter 5 Ethics (John Fulton and Carol Costley)

Here the rationale for any concern for ethical considerations in research is discussed through a short historical review followed by the steps it is usually necessary to take regarding ethics of the research. Consideration is given to the research design, the participants in the research, ethics committees in the university and professional ethics of work situations. The specific characteristics of practice-based research and considerations of research ethics for practitioners who are often insiders in their research fields are given particular attention.

PART II

Chapter 6 Methodology as Personal and Professional Integrity (Kate Maguire)

Moral and ethical domains need to be considered along with the relevant literature and the type of knowledge which is found to be informative and valued by the particular area of practice. The situation for researchers in their professional field involves their position in the field or organisation and the standpoint they take on research integrity in their area of investigation. Researchers in this sense serve a multidimensionality of stakeholders, especially the authority of the university and the professional field or organisation.

Some constructions of research approaches are more concerned with issues of reliability and validity, whereas for others it is trustworthiness and consistency. The personal and professional integrity of the researcher sits at the centre of every action and every choice, thus for professional doctorates where the researcher is more closely connected with the context of the research, the trustworthiness of the research is dependent on the trustworthiness of the researcher and their ability to articulate and account for their choices. This is usually achieved through critical reflection. The chapter lists influences that need to be considered and types of questions to be asked in relation to professional integrity when planning a research design. The approaches to research design raise ethical considerations concerning the choice of what to research, why it is to be researched and how.

Chapter 7 Capstone Design (Valerie A. Storey)

This chapter explains how a dissertation or thesis changes in methodology, format and impact to become a dynamic document guiding change to help resolve a complex problem of practice. Alternative dissertation models are discussed and the Dissertation in Practice (DiP) as a model for practice doctorates is recommended.

Chapter 8 Auto-ethnography (Kath Woodward)

This chapter explores auto-ethnography as a research methodology and a set of methods which are increasingly popular as a way of getting 'inside' the field. The

chapter draws upon work in sport, including one of the editor's work on the Olympics and a range of boxing auto-ethnographies to evaluate the approach drawing upon psychosocial and feminist theoretical perspectives.

Chapter 9 Action Research (Gill Coleman)

The strengths, and challenges, of action research are explored, through this often misunderstood approach (rather than a method) that combines action and systematic reflection. The key principles to action research are explored: it is highly participative; it places the researcher as always present in the research, as co-participant and/or facilitator; and it is messy and emergent. It is therefore appealing to practice-based researchers, who want simultaneously to advance their understanding and their capacity to enact that understanding in their day-to-day work.

Chapter 10 Case Study (Catherine Hayes)

This chapter explores case study methodology within the context of a practice-based professional doctorate. Definitions of case studies are considered and a definition pertinent to practice is established. The variety of approaches to the design of a case study is given detailed consideration: empirical–theoretical, single or multiple, explanatory or descriptive, as well as specific or general approaches are considered. The combination of research methods and how they can be used to address issues of practice development and ways in which the data can be combined are explored.

Chapter 11 Mixed Methods Research (David Plowright)

The chapter introduces an alternative mixed methods approach, an integrated methodology, that is an innovative way of addressing many of the conceptual and design issues associated with a more traditional mixed methods perspective. It provides a coherent and easily applied framework for planning and implementing small-scale research aimed at evaluating and improving practice located in a professional context.

Chapter 12 Translational Research (John Fulton)

This chapter considers translating research findings into practice. Using examples from health and education it considers ways of ensuring the reliability and validity of original research. The chapter concludes with a consideration of the ways in which translational research can structure a postgraduate research project.

Chapter 13 Theory of Change (Heléne Clark)

This chapter introduces theory of change as a methodological approach which can shape and focus a professional doctorate. Theory of change is a well-used and often

demanded process nowadays in social change, social research and philanthropy. The chapter outlines the principles of theory of change and gives a step-by-step guide as to how it can be used to shape a practice-based research study. Some useful addendums help to expand understanding of theory of change.

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PART I

Underlying Principles

1

PHILOSOPHY AND PRACTICE – WHY DOES THIS MATTER?

T. W. Maxwell

INTRODUCTION

Those who are approaching (or doing) practice-based research need to understand the tradition, the philosophical underpinning, of that work. This is especially the case where the neophyte researcher is most likely to think of research in the most

common tradition of unidisciplinary work governed by laws, as is the case in the vast majority of PhDs. As will be discussed below, one way of understanding this is to think of such research as mode 1 (see below). In contrast, professional doctorate (PD) research is more often mode 2 and as such is transdisciplinary. Each has its own philosophical tradition.

The work of Gibbons et al. (1994) was an important breakthrough for many interested in doctoral education as it clarified and crystallised the otherwise implied distinctions between the PhDs and the PDs that were being addressed in the early years (1990s). However, recent research by Flood (2011a), discussed below, has shown that the work of Gibbons et al. can be thought of as one of the more recent developments of a long-standing and important thread in philosophical thought.

The rise of PDs in Australia and elsewhere in the last two decades or more has led to a reconsideration of the nature of doctoral education and an interest in practice-based research. There is not always clarity about the nature of PDs despite their being on the scene for more than 20 years. For example, Scott et al. (2004) in their UK-based study of PDs in three professions found four kinds: disciplinary, technical rational, dispositional and critical. Of these the first two are more usually linked to the PhD and the latter two to the PD. In Australia, despite a 'crisis discourse' on the PhD (e.g. Cuthbert and Molla, 2015) and the critique of the place of PDs in doctoral education (e.g. Evans et al., 2005), PDs are in a reasonably healthy state. For example, Kot and Hendel (2012) report the emergence and growth of PDs in Canada, the United States and the United Kingdom as well as in Australia. However, in Australia, there has been a decline in awards associated with the standard professions, for example the EdD, and a phenomenal increase in niche PDs (Maxwell, 2011). Clearly, though, PDs are part of the higher education landscape (Lee et al., 2000; Kot and Hendel, 2012; Costley, 2013).

PDs, then, are an important arena for doctoral research in the professions. PDs are also an important addition to university awards because they provide the site for practice-based research at a high level. Practice-based work is embodied in professional practice sometimes producing new knowledge which Gibbons et al. (1994) term mode 2 knowledge production. Mode 2 knowledge is generated through addressing problems or issues which occur in practice and as such it tends to draw from a range of disciplines and approaches. An exploration of these concepts form the first sections of this chapter which is followed by an outline of the relevant Flood (2011a) research on ancient to recent philosophical bases for PD work. The chapter concludes with a consideration of some implications that follow from this line of reasoning. Firstly we should clarify some definitions.

KEY DEFINITIONS

The relevant definition of 'profession' in the *Concise Oxford Dictionary* (COD) is 'vocation or calling especially one that involves some branch of learning or science'

and this is consistent with both the definitions of PDs that follow. However, it is important to note that the COD definition appears quite narrow in the face of the recent growth of cutting-edge professional work involving more than one kind of professional knowledge (see niche doctorates, Maxwell, 2011). In Australia the definition of the PD is taken as follows:

> A program of research, scholarship and advanced study which enables candidates to make a *significant contribution to knowledge and practice in their professional context*. In doing so, a candidate may also contribute more generally to scholarship within the discipline or field of study. Professional Doctorate students should be required to apply their research and study to problems, issues or other matters of substance which produce *significant benefits in professional practice*. (CDDGS, 1998, 1; my emphasis)

The definition in the United Kingdom is as follows:

> A Professional Doctorate is a programme of advanced study and research which, whilst satisfying the University criteria for the award of a doctorate, is designed to *meet the specific needs of a professional group* external to the University, and which develops the capability of individuals to work within a professional context. (Hoddell, 2002: 62, in Costley, 2011: 11; my emphasis)

There are similarities and differences here. For example, both identify the university as the quality control institution. The former identifies professional practice (twice) whereas this is implied in the latter (see italics) and both mention 'advanced study' and 'research'. Personal capacity building is explicit in the latter and implied in the former. Both give a clear view of what is required. Practice- and work-based doctorates (Costley and Lester, 2012) would fall into this group. First-degree doctorates, such as the Doctor of Medicine in the United States, are not considered PDs.

Activity

Thinking about your own professional practice, what types of knowledge are most valued?

Consider transdisciplinary conceptualisations of knowledge, purely practice-based or practice-led thinking about knowledge, practical situation and practice-based problems, theoretical knowledge, an evenly balanced mixture of theory and practice or unidisciplinary knowledge. Why is this the case?

In the development of your research how will this structure your thinking in the generation of your ideas?

Consider the ways in which this might present particular challenges.

'Professional practice' links two concepts that are difficult to define. Indeed the former has clearly changed in meaning, particularly over recent times. Green (2009: 1–6) discusses these and related concepts (see also Kemmis, 2009: 22–3) but lack of space precludes rehearsing Green's discussion. Ultimately, Green (2009: 6–7) suggests four senses to assist in the understanding of 'professional practice':

a. practising of a profession (medicine, education, and so on);
b. practising professionalism (enacting what it is to be a professional);
c. professional practice evokes a moral quality (doing what is right for others); and
d. practising as a professional implies a fee for service (a service that cannot be done by the uninitiated).

Green goes on to point out (7–9) the importance of authentic activity and how experience can grow out of practice. 'Experience' here means more than length of time in practice and implies improvement of some kinds over time usually relying on reflection. He also points out that practice is always contextualised, as he put it: '"context" needs to be thought of as *part of practice*, as inscribed in it' (8). This leads us to the consideration of mode 2 knowledge production wherein context is critical.

MODES 1 AND 2 KNOWLEDGE PRODUCTION

Historically, Gibbons et al. assisted the conceptual development of PDs with their publication of *The New Production of Knowledge*. While there have been critiques of the Gibbons et al. conceptualisation (see e.g. Scott, 1995; Fuller, 1995), their work has been useful. Lee et al. (2000: 124) used Gibbons et al.'s ideas to explicate their model for PD development. The central feature, where professional work leading to a doctoral award should be placed, they argued, was at the confluence of the workplace, the profession and the university. The model was useful at that time because it pointed to the centrality of the workplace, an important idea for academics at the time (Maxwell, 2003). At about the same time David Boud developed a curriculum model for work-based learning that focused more on the individual and brought together the workplace and the profession, the 'university' not being required in the general model (Boud, 2001, in Costley and Lester, 2012). Boud's focus upon the student is appropriate in PD learning and research since it is the capacity building of the person and the research questions that are developed by the person in the thoroughly contextualised research process that are central to the development of the PD work. Implied here is the idea that a university-based supervisor/adviser cannot usually provide the research questions to the PD student as is commonly the case in much unidisciplinary research.

Lee et al. (2000) argued, as others have done since, that mode 2 knowledge production underpins research of professional practice. Usher went a little further. She argued that mode 2 knowledge is a more appropriate conception for the 'knowledge

economy' (Usher, 2002: 147). 'Knowledge economy' has an implication of immediacy. Seddon (1999) made a more general point than Usher (2002): mode 2 knowledge is more likely to be useful in its own right. This is not to say that mode 1 knowledge production is not worthwhile, but rather that mode 2 knowledge has its own warrant, namely the production of useful knowledge by the professional in the workplace in association with others in community. In similar vein, Lee et al. (2009: 9) put the issue succinctly that PD education, potentially, could be underpinned by 'the generation of a different knowledge distinguished by an overall practice rationality'. Consequently mode 2 knowledge production, when thought of from this perspective, contrasts strongly with mode 1.

Mode 1 knowledge is more typically associated with the PhD rather than the PD. Mode 1 knowledge is generated in a disciplinary context: that is, in universities or affiliated institutions. It arises from an academic agenda, is usually discipline focused but sometimes multidisciplinary and is accountable to the academic community. In many respects, we can say that mode 1 knowledge production is more associated with academic knowledge, and so disciplines, as areas of study. Its project is to produce knowledge governed by laws. Hamilton (2005: 287) put it this way: 'Theoretical science refers to detached forms of inquiry, contemplative forms of reasoning and the establishment of necessary, eternal and unchanging truths.'

So, mode 1 contrasts strongly with mode 2 knowledge production. Reviewing their work of the previous decade, Nowotny and colleagues identified the key features of mode 2 knowledge production as:

a. generated in the context of application;
b. transdisciplinary – 'the mobilization of a range of theoretical perspectives and practical methodologies';
c. produced at a greater variety of sites due to technological advances;
d. highly reflexive; and
e. subject to novel forms of quality control, not all of which are desirable (Nowotny et al., 2003: 186–8).

It is worth noting the distinction that Nowotny et al. (186) make regarding mode 2 knowledge production and applied research.

'Mode 2' knowledge is generated within a context of application. This is quite different from the process of application by which 'pure' research, generated in the theoretical/experimental environment, is 'applied', technology is 'transferred', and knowledge is subsequently 'managed'. The context of application, in contrast, describes the total environment in which scientific problems arise, methodologies are developed, outcomes are disseminated, and uses are defined.

We can see then that mode 2 knowledge results from practitioner agency and/or reflection and/or research *in* practice. Research sites are geographically widespread (workplaces) which contrast greatly with distributed but focused places of mode 1 research, the universities, where problems '[are] set and solved in context

governed by academic interests of specific communities [characterised as] disciplinary; homogeneous; hierarchical and form preserving; accountable to discipline-based notions of methodologically "sound" research practice' (Lee et al., 2000: 124).

Lee et al. (124) also note that there are overlaps between the two modes, that is they are not discrete, and this is consistent with the Maxwell and Vine (1998) conceptualisation.

AN IMPORTANT PHILOSOPHICAL THREAD

J. Bernard Flood completed his EdD portfolio in 2011 with Dr Joy Hardy and myself as co-supervisors. His was not a practice-based doctorate but was, rather unusually, theoretical. It might have been a PhD but the research issues addressed underlay professional practice. Paradoxically, his research was quintessentially mode 1. Flood established an important and definite thread in philosophical thinking in practical reasoning starting with Aristotle (384–322BP). Flood, like Hamilton (2005: 287), pointed out that Aristotle made a distinction between the practical and theoretical sciences. This is a distinction that is followed in this section which relies heavily on Flood's work (Flood, 2011b: 6–26).

Ultimately what we want in a professional person is practical wisdom, someone who has experience enough to recognise the points of significance in the chosen field of practice. This involves the confluence of real problems in real places, in real time and with real people and real resources. For Flood the starting point is Aristotle's *phronesis*. Flood understood the debates around *phronesis* over the last two decades and concluded on this with a quote from Natali (2001: 188, in Flood 2011b: 6): 'there is wide agreement among interpreters in characterising *phronesis* as practical knowledge. … *Phronesis* brings about agreement of reason and desire that finds expression in good deliberation.' Here there is already the moral sense and deliberation that were identified above about professional judgement. 'For Aristotle, then, *phronesis* involves deliberation, leading to (moral) choice and that leads to action. The choice is rational and is linked with deliberation' (Flood 2011b: 8). Reflecting on *phronesis*, Dunne (1997: 368) wrote it 'is precisely the kind of reason which, as including practical *nous*, has developed an "*eye*" (Aristotle) or a "nose" (Wittgenstein) for what is salient in concrete situations'. Thus *phronesis* concerns practical wisdom and is rational and ethical, associated with the right action in real situations. And, according to Flood, such practical wisdom resides in a *phronimos*, the person who has 'an initial aptitude cultivated and developed by experience' (Guthrie, 1998: 346, in Flood, 2011b: 9). A *phronimos* is close to what we understand as an experienced person in the full sense of 'experienced'.

Flood argued that *phronesis* was further developed by Aquinus (1325–74) as *prudentia* which goes beyond our common understanding of the term 'prudence'. Flood (2011b: 18), interpreting Aquinus, argued that *prudentia* applied to all decision

making, not just to ethical decisions thus extending Aristotle. Three stages were required:

I   weighing up possibilities around the means to the good desired;

II   judging which means is the best; and, lastly and most importantly,

III executing/implementing the results of that deliberation (18).

Here the moral sense is retained ('good desired') as is the intellect and action. Flood (19) also points to the importance of experience in acquiring *prudentia* as seen in *phronesis*. *Prudentia* 'is the outlook or disposition which enables the agent to arrive at the right application in the particular situation and to perform it' (Westberg, 1994: 190, in Flood, 2011b: 20). So there is an emphasis on the particular situation and action.

John Henry Newman (1801–90) extended both of the above conceptions as the illative sense. Newman's conceptualisation allows insight and intuition along with rationality from many sources of data (Flood, 2011b: 20–30), though it should be said that Newman depended heavily on Aristotle's *phronesis* (Dunne, 1997: 33–8). Aquino points to the contribution made by Newman and in so doing explicates the illative sense:

> Newman's project focusses upon the informal and tacit dimension of reasoning, shaped by experience and personal insight. … The illative sense sifts, evaluates, and integrates various pieces of evidence into a synthetic judgement and furnishes concrete answers to specific questions. … The illative sense connects various pieces of data, its manner of concluding does not follow a strictly rule-governed process of inquiry. (Aquino, 2004: 5, in Flood, 2011b: 21)

Note particularly the addition of the 'informal and tacit' in the illative sense.

Newman was concerned with the epistemic rather than the statistical probability (Flood, 2011b: 23). This phenomenology of mind approach draws criticisms but Newman 'appeals to the normal operation of the mind in concrete matters which are too subtle, minute, delicate and intricate to be put into logical rules or forms' (Flood, 2011b: 22). Moreover, decisions made using the illative sense in these complex situations are made with certitude not certainty (22–3) since the illative sense does two things. It:

I   brings together *all* arguments, however subtle; and

II   determines their worth separately and in combination (27).

This leads to a decision to act with certitude and, like the philosophers before him, Newman contended that the illative sense was concerned with the practical.

Flood (2011b: 31–2) then added an important dimension. He critiqued the three philosophers' primacy given to the individual and individual thought. Flood used Macmurray's (1891–1976) 1953–4 Gifford Lectures to shift the centre of reference

from the person in thought to thought in action. Kilpatrick (1989: xi, in Flood, 2011b) put it succinctly thus: 'the essence of the self is that of an agent in action rather than a thinker in thought'. For Macmurray action was more central to existence than thought since action is embedded in human experience which is shared. This also resonates with Aquino's (2004, in Flood, 2011b: 30) position that the illative sense is communal: that is, guaranteed only through communities of informed judgement. Kemmis too pointed out that 'practice has a number of extra individual features that need to be elucidated. These include such features as being formed and conducted in social settings, shaped by discourses, and being dramaturgical and practical in character' (2005: 394).

These ideas and much recent neo-Aristotelianism thinking challenge modernist, goal-oriented propositions about scientific management (Hamilton, 2005: 287). One could say too that this is precisely what the mode 2 PDs, and particularly the practice-based doctorates, are doing in doctoral education. Green (2009: 5) identifies Alasdair MacIntyre, Stephen Toulmin, Hans-George Gadamer and Joseph Dunne as key thinkers in this area. To these we can add Wilfred Carr, Stephen Kemmis and Bill Green himself. Even Donald Schön, especially in his extended critique of technical rationality (Schön, 1983: 21–49) and his 'Research and practice' chapter (307–25), gives early attention to the relationship between rationality and practice from the practitioners' point of view. Claude Lévi-Strauss could also be included. His 'The science of the concrete' and, in particular in the chapter where he addressed the *bricoleur/bricolage* (Lévi-Strauss, 1962: 16–22), provides a French anthropologist's view. Not least has been the recent leadership by Gibbons and Nowotny through their work on mode 2 knowledge production. All were writing in the 'rough ground' of knowledge production.

In summary, the philosophical thread attended to here shows there is a long tradition of thinking that we can call practical wisdom that is separate from, or at least different to, the presently dominant scientific reasoning. Here, then, is the warrant for research on professional practice. The argument for research *in* practice is strong. The earliest version, *phronesis*, focused upon intellectual virtue in practical ethical matters being developed centuries later in Newman's illative sense of 'informal and tacit dimension of reasoning, shaped by experience and personal insight' (Aquino, 2004: 5, in Flood, 2011b: 21). The illative sense is applicable to reasoning about all concrete matters leading to the right action (Dunne, 1997: 37). Practical wisdom is gained through (critical reflection in and on) experience. Practice-based research by the practitioner enables precisely the researcher's phenomenology of mind to engage in the research process and to communicate the results to the relevant community. Hamilton's summary is elegant:

> Practical science … aims to develop and improve practical reasoning, recognising that such activities are both morally and contextually informed. In practice, then, there is a necessary association between the practical, the ethical and the contextual. (2005: 287)

Activity

Before reading the next section, write down the implications you think Hamilton's 2005 quote above might have for the development of your practice.

If you have a research project in mind, consider also its implications for the development of that project.

IMPLICATIONS

There is a range of issues that follow from this way of thinking. Firstly, the complexities of practice in the everyday real-life setting of real people, places, timings and funds mean that PD research cannot normally be addressed by a neophyte. One reason for this is that, unlike in mode 1 knowledge production where the researcher is typically guided by a university supervisor/adviser/mentor, the mode 2 knowledge producer works on questions identified out of their practice usually geographically elsewhere from the university. Gaining supervision/advice/mentoring off-campus for PD work, while not as direct as on-campus, can easily be facilitated by modern technologies. Moreover, the complexities of the workplace mean that PD research demands the knowledge of practice complexities (*phronesis*) and nuances (*techne*). That knowledge opens opportunities for significant questions to be asked. This is no easy task, certainly so for the neophyte. In short, professional, and even worldly, experience is essential. Such experience means that the 'student' is usually more in control of the research process from the point of view of its supervision.

Complexities and nuances are more pointed as the research is undertaken *in*, not on, the workplace. Political niceties need to be negotiated carefully over time. This is especially so since the researcher/employee does not exit the research site but is embedded in it. Additionally, challenges to custom and practice through the research processes and outcomes can be personally and professionally challenging both to the researcher and for other workers. Moreover, the status of different people is likely to be challenged in such an environment. New identities might be formed. Indeed, PD work is clearly a process that facilitates the development of a professional identity. More research is needed on this (see Trede et al., 2012). Studies with PD students like that of Mantai (2015), who used interviews of 30 PhD students on their becoming researchers, would be useful though preferably using a mixed methods approach. PD research in the workplace contrasts starkly with the 'armchair' deliberation of much mode 1 research on the workplace by an outsider who – although this is not always straightforward – more simply negotiates access, implements the research plan and then departs.

There are also implications for the university. Clearly a new market for students has developed. This is an important consideration in the present market economy that universities, at least in the United Kingdom and Australia, currently face. As

Costley (2013) has argued, there is also a demand for higher education graduates who have more work-related skills including research skills. But more than this, universities should be employing PD graduates for the expertise and experience that they would bring to the supervisory/advisory process. Alternatively, an adjunct from a relevant workplace may be engaged as part of the supervisory team. As indicated above, this process has some considerable differences as compared to much PhD supervision.

Such differences evolve from the idea that workplace research, in the heat of action, requires judgements that are 'good enough' (Flood, 2011b). The concept of 'good enough' comes from Winnacott (1971, in Flood, 2011b: 35) and is extremely useful in the real world. Winnacott, a London psychologist, was working with mothers who were concerned whether their mothering was adequate. Rather than aim for perfection and always be thwarted, Winnacott advised they aim for their mothering to be good enough and be relaxed in that. The idea of 'good enough' is essentially consistent with professional work: decisions are made and monitored; modifications can be made if required. Such deliberations and actions contribute to the formation of a professional identity and are based in reflexivity which is 'representative of a growing maturity and self-reflexivity' (Barnard, 2011: 56) desired of the professional and in PD work.

It follows from the reasoning immediately above that another implication is that workplace research includes practical reasoning. Such practical reasoning can be developed over time, that is from experience (see above). It may be formalised in a PD. The development of practical reasoning intended in undertaking a PD is analogous to the development of research skills as one of the major outcomes of a PhD. Thus the award of a PD gives the workplace researcher a licence to research, independently of supervision/advice, in the same sense that a PhD does.

The final implication is that the subject, the body, is very much present in professional practice research. The researcher is more than an insider but *inside* the research. Green and Hopwood (2015: 5) put it this way: 'This is thinking with and through the body, in the very course of practice, as a primary mode of being and becoming.' This contrasts greatly with typical mode 1 research which maintains an avowedly 'hands-off' or detached stance. The PD practitioner also finds an authoritative voice (Reid and Green, 2009) through the research. Armsby and Dreher (2011: 75) concluded: 'We think of the outcomes of a PD … as being embodied in the candidate, now and in the future; located in the context of the research and development work; shaping professional knowledge and practice or a combination of all these three.'

CONCLUSION

PDs, including those identified as practice-based doctorates, have become an important part of the higher education research scene over the last 25 years. This is especially the case in Australia and the United Kingdom. The work of Gibbons

and colleagues highlighted the important distinction that now is aligned with PD work: unlike applied research, mode 2 knowledge production is generated in the context of application which 'describes the total environment in which scientific problems arise, methodologies are developed, outcomes are disseminated, and users defined' (Nowotny et al., 2003: 186). Such PD research is undertaken *in* not *on* the workplace. Flood (2011b) showed, ironically using mode 1 knowledge production, that the idea of knowledge production in context has a proud philosophical history beginning with Aristotle (*phronesis*), then through Aquinus (*prudentia*) and Newmann (the illative sense). Later writers such as Dunne, Hamilton and Gibbons and colleagues have added to our understanding. Being clear about these philosophical ideas is essential for those undertaking PD research and its supervision. Understanding the long philosophical tradition underpinning professional and practice-based research gives the researcher confidence.

Several implications were drawn. The argument was made that experience, in the full sense of the term, is necessary to undertake PD work successfully. Research in the workplace means that political *nous* has to be brought to bear, identities shaped and practical reasoning developed, the latter being akin to the development of research skills in the successful PhD. Following Schön, deliberation in and on action, together with reflexivity, mean that workplace research can be 'good enough' and is embodied in the person of the practitioner. The ultimate outcome is for the professional to become a 'wise practitioner' (Flood, 2011b).

Key Points

- Professional practice can produce new knowledge which is generated in the context of application.
- Professional practice knowledge in this sense is not what has been called applied knowledge because it 'describes the total environment in which scientific problems arise, methodologies are developed, outcomes are disseminated, and users defined' (Nowotny et al., 2003).
- Workplace research undertaken by practitioners themselves brings with it practical reasoning. Such practical reasoning can be developed over time, that is from experience, and this is a significant source of knowledge.

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Costley, C. (2013). Evaluation of the current status and knowledge contributions of professional doctorates. *Quality in Higher Education*, *19*(1), 7–27, DOI: 10.1080/13538322.2013.772465.

The status and knowledge contributions of professional doctorates (PDs) undertaken by practising professionals is centre stage in this article. It gives a good introduction to PDs worldwide via an extensive literature review and is illustrated with a research project. Additionally, individual chapters in Storey, V. A. (ed.) (2016) *International Perspectives on Designing Professional Doctorates: Applying the Critical Friends Approach to the EdD and Beyond* (London: Palgrave Macmillan) provide a country-by-country breakdown of PD development.

Flood, J. B. (2011a). Towards the philosophy of education in the NSW Clinical Pastoral Education (CPE) Movement. Unpublished EdD portfolio, University of New England.

Flood established an important and definite thread in philosophical thinking in practical reasoning starting with Aristotle (384–322BP). Flood argued that Aristotle's *phronesis* was further developed by Aquinus (1325–74) as *prudentia*. John Henry Newman (1801–90) extended both of the above conceptions as the illative sense. Flood then used Macmurray's (1891–1976) 1953–4 Gifford Lectures to shift the centre of reference from the person in thought to thought in action. His work leads to the conclusion that experience, in its fullest sense, is necessary to undertake PD work successfully and that workplace research can be 'good enough'.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies* (London: Sage).

The work of Gibbons and colleagues was an important breakthrough for many as it clarified and crystallised the otherwise implied distinctions between the PhD and the PDs. Their work was an accessible and timely way in the philosophical debate for which Flood has given the history of the key thinkers. Their conception of mode 1 and mode 2 knowledge production was key. The latter was later refined by Nowotny, H., Scott, P., & Gibbons, M. (2003) Mode 2 revisited: the new production of knowledge. *Minerva*, *41*, 179–94.

Green, B. (ed.) *Understanding and Researching Professional Practice*. Rotterdam: Sense Publishers.

A number of useful chapters can be found here, especially Green's Introduction. Read and Green's chapter concerning the practitioner's voice places the practitioner at the centre of the research. The article by Trede, F., Macklin, R, & Bridges, D. (2012) Professional identity development: a review of the higher education literature. *Studies in Higher Education, 37*(3), 365–84. DOI: 10.1080/03075079.2010.521237 develops the complementary notion of professional identity development.

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