Working Doctoral Students: Challenges and Opportunities
Jim Cumming, ANU and Kevin Ryland, Deakin University

Abstract
Doctoral education is traditionally conceptualised in policies and practices about young, full-time students with no work or related commitments. However, nowadays, doctoral candidates constitute a diverse population working in various institutional, community and industry sites. This paper will report on initial work conducted as part of an ARC Linkage Project in which three postgraduate student associations are involved as industry partners – viz. CAPA, PARSA and DUSA. The main objective of the paper is to identify and explore some of the issues identified by two researchers who are working independently and collaboratively in this project to investigate the contemporary experiences of full and part-time doctoral candidates.

Introduction
This paper has been prepared by two full-time doctoral candidates who are members of an Australian Research Council (ARC) Linkage Project entitled ‘Working Students: Reconceptualising the Doctoral Experience’. The project commenced in early 2004, with Kevin enrolling at Deakin University (Deakin) and Jim at the Australian National University (ANU).

The aim of the project is to develop detailed information from two related studies, in distinctive but complementary sites, about the contemporary doctoral experience. The research focus common to each study is the inter-relationship and significance of doctoral candidates’ workforce participation, work training and career development. Kevin is exploring these issues for part-time candidates at Deakin, while Jim is investigating them in relation to full-time candidates at ANU.

The Chief Investigators (CIs) for the project are Professor Terry Evans and Dr Peter Macauley (Deakin) and Ms Margot Pearson (ANU). Three industry partners are also involved, namely, the Council of Australian Postgraduate Associations (CAPA), the Postgraduate And Research Students Association, ANU (PARSA) and the Deakin University Students Association (DUSA). It is envisaged that this project will not only generate new knowledge in doctoral education, but also inform the development of Australian postgraduate associations’ policies and practices. Of particular significance will be the focus on developing new conceptual frameworks along with tools for data collection and analysis.

Designed to raise awareness of the project and some initial research, this paper is structured in two parts. Part 1 is written by Kevin and documents the changing nature of doctoral candidates using data and analysis techniques, with particular reference to part-time and professional doctorate candidates. Part 2 is written by Jim in the form of a narrative containing reflections on his initial ‘lived experience’ as a PhD candidate. The paper concludes with a brief discussion on some of the implications arising for the project team, PhD candidates generally, and those with responsibility for doctoral education.
Part 1 – Changes to the Doctorate

The nature of doctoral candidates
There has been a large growth and increase in diversity of doctoral students in Australia in recent times (Pearson 1999; Evans 2001; Harman 2002; Neumann 2002; Evans et al. 2003). The population has, for example, grown from 329 higher degree students in 1949 to 37,377 higher degrees by research students in 2000 (DETYA, 2001). In addition there is long term evidence of increasing diversity in the doctoral student population. For example, the percentage of women undertaking higher degrees or PhDs has increased from eighteen percent (in the higher degree population) in 1949 (but dipped to twelve percent in 1959) to forty-eight percent (in the doctoral population) in 2000 (DETYA, 2001).

Using data derived from the aggregate national student enrolment sets from Department of Education Science and Training (DEST) of the doctoral student population in 1998 (DEST, 2004 a) and in 2003 (DEST, 2004 b) a complex picture of the trends and make up of the population emerges. However, it needs to be remembered that the Research Training Scheme was introduced during this period and this may have influenced the trends in the discussion that follows. In general, though, the doctoral student population did continue its constant growth in this case by forty-three percent from 25,202 in 1998 to 35,875 in 2003.

In terms of the age of PhD students in 1998, sixty-five percent of doctoral students were over the age of thirty and this same percentage persisted in 2003. However, there was a significant increase in the student population over fifty, which increased by 106 percent from 2,353 in 1998 to 4,848 in 2003. This later figure represents thirteen percent of the 2003 population, which is more than the student population under the age of twenty-four (4,550).

Looking at the discipline mix in the period 1998 – 2003, there has been a small shift away from the Natural and Physical Sciences, which decreased from twenty-seven percent of the total student body in 1998 to twenty-two percent in 2003. The shift has been towards Art, Humanities and Social Science, which increased from twenty-seven percent in 1998 to thirty percent in 2003. However, many of the other disciplines including Education remained level as a proportion of the overall subject mix during this period. Although, of course, they all grew in absolute numbers in line with the overall population growth.

The age profile of doctoral students, not surprisingly, differed considerably across disciplines. For example, Education (and to a lesser extent Management) had an older profile with forty-seven percent of its student between forty and forty-nine in 2003, up from forty percent in 1998. In contrast, Natural Sciences had sixty-one percent of its students below the age of thirty and this is an increase from 1998 when it was fifty-five percent. Therefore, it appears that Education students are getting older while Natural Science students are getting younger. Apart from the growth in the over fifties, as mentioned above, the age profile of the overall population did not change significantly between 1998 and 2003 (possibly as a result of changes in disciplines such as those cited above cancelling each other out).
In terms of identifying the modal student again there are differences across the disciplines but little changed between 1998 and 2003. Overall, in both 1998 and 2003, the modal student was between the age of twenty-five and twenty-nine, full-time and male. This was the same for Agriculture, Engineering, Natural and Physical Sciences. However, in 2003 in Arts, Education, Society and Culture studies the modal student was female, part-time and aged between forty and forty-nine. For Health the modal student was female, full time and aged between thirty and thirty nine. The modal Architectural and Management student in both 1998 and 2003 was male, part-time and between the age of forty and forty-nine.

Although the number of part-time students has grown between 1998 and 2003 from 9,126 to 14,007, the percentage of students studying part-time in Australia decreased slightly from thirty-eight percent to thirty-six percent. An example of this effect can be seen in the field of Education where 1,330 students were studying part-time in 1998 and by 2003 this had risen to 1,715 students but as a proportion of the total Education doctoral student population the proportion remained constant at sixty-seven percent. It also not surprising that younger students are more likely to be full-time. For example, in 2003 eighty-four percent of students under thirty were full-time compared with forty-eight percent over thirty (there was little difference between the sexes).

In looking at how the student population in 2003 was distributed geographically, a number of trends can be seen. Firstly, the states and territories with only one or two institutions often differed considerably from the national distribution. Therefore, for example, in the Australian Capital Territory (ACT), students are far more likely to be below the age of thirty, full-time and male than the national average. This may be a function of the subjects studied, which are overly represented in the Natural Sciences and, curiously given the student composition, Society and Culture disciplines. Where as the Tasmanian student population is older than the average and has more part-time students as a proportion of its student population than any other state. In terms of gender balance, the only state that stands out apart from the ACT is Victoria, which has more female students than the national average (fifty-two percent against forty-nine percent). There was no noticeable difference between the proportion of full-time and part-time student between states other than the two cases cited above.

Finally, in addition to the aforementioned example of the ACT, there are a few anomalies in terms of the locations where subjects are taken by PhD students. For example, Western Australia has noticeably more Education students in its population compared with the national average (seventeen percent against ten percent). South Australia has more Health students (eighteen percent against fourteen percent national average). Queensland has more Information Technology (IT) students (five percent against three percent national average) but Victoria has more of the total IT student population of Australia than any other state (fifty-two percent against forty-nine percent). There was no noticeable difference between the proportion of full-time and part-time student between states other than the two cases cited above.

All of the above analysis indicates the diversity of the student population and gives a feel as to how it might be changing, although it is recognised that the timeframe of the
analysis may be too short to show long-term trends. Also, as mentioned the Research Training Scheme was introduced during the period of analysis.

Research culture
The research culture found in academia and its influence on the doctoral experience is a crucial and widely debated subject (Gibbons et al. 1994; Godin 1998; Lee et al. 2000; Evans 2002). The focus of the discussion that follows here is the culture in which part-time students are likely to find themselves.

Evans sets the scene by arguing that with the rise of the ‘knowledge economy’ there is an increasing pressure for ‘researchers who can produce tradeable or useful knowledge’ (Evans 2002, p 158) and he believes that part-time students are more likely to fulfil this need than full-time students. He also argues that the traditional PhD is under scrutiny because of ‘demands for research and development having broadened in the age of late modernity’ (Evans 2002, p 157). These pressures, it has been argued, have changed the way research is being done from what has been described by Gibbons and others (1994) as ‘Mode 1’ to ‘Mode 2’. ‘Mode 1’ is based on a ‘traditional form of university based research, determined by disciplinary dynamics and undertaken by an academic elite’ (Neumann 2003, p.168), where as ‘Mode 2’ is ‘transdisciplinary, undertaken within a variety of primarily non-university settings by problem solving teams’ (Neumann 2003, p 168).

However, the idea of research as the sole domain of the university community (Mode 1) at some point in the past is a contentious one. For example, Godin believes there has only ever been one ‘mode’ of research Mode 2 which he states has had a ‘varying extent of heterogeneity over time’ (Godin 1998, p.478). However, Gibbons and others acknowledge this and say ‘Mode 2 is not supplanting but rather supplementing Mode 1’ (Gibbons et al. 1994, p 14). In addition, Lee and others also say it is not simply a ‘before and after’ case but rather Modes 1 and 2 ‘overlap significantly’ and they acknowledged that ‘elements of both have always existed’ (Lee et al. 2000). Usher and Edwards agree saying, ‘Mode 2 is neither new nor necessarily opposed to Mode 1. Mode 2 has been around for a while, and knowledge production has historically shifted between the two modes’ (Usher and Edwards 2000).

What is critical is the nature of the research culture that part-time students are immersed in and Gibbons and others’ analysis it is believed will provide a useful tool to help understand the current research environment. For example, Lee and others argue that, despite the shortcomings in some of the conceptual issues involved with Gibbons and others’ study, ‘professional doctorates can be seen in the light of these developments, to represent an emerging form of knowledge production and practice within a Mode 2 environment’ (Lee et al. 2000, p.125). Evans further states that these programs ‘foreground part-time study’ (Evans 2002, p.158) and so it could be argued that many part-time students find themselves studying within a ‘Mode 2’ environment particularly if their research is related to their work and situated in the workplace.

Research education and support
In terms of research education and support, it is felt that the professional doctorate provides an interesting example to examine in terms of the relationship between doctoral students and work.
The development of the professional doctorates it has been argued is a response to the needs of the ‘new economy’ of the last decade in Australia (Evans 2002) and other developed countries (Bourner et al. 2001). In the last two decades of the 20th century there was much criticism of the traditional PhD. For example, in Australia it was considered by the government in 1999 to be too narrow, specialised, inflexible, took too long to complete and doctoral students were often under/unemployed (Evans 2001). Similar messages were also signalled in the UK in the late 1980s when various reports found that PhDs students were finding it hard to be employed, completion rates were low and they took too long to complete (Bourner et al. 2001).

It was in this environment that professional doctorates grew, in Australia from only two programs in 1989 (Lee et al. 2000) to 131 in 2001 (McWilliam et al. 2002). In the UK the growth was from 109 programs in 1998 to 153 in 2000 (Bourner et al. 2001). However, as Jablonski points out, the origins of a doctorate for professionals can be traced much further back than the above might suggest. In the USA for example the Doctorate of Education (EdD) was first offered by Harvard University in the 1920s (Jablonski 2001). Yet in many professions it has only been a relatively recent development that an undergraduate qualification was needed to practice. For example, in the case of Law in the UK it was only from 1975 that it became a pre-requisite for barristers to have a degree to join the bar (Bourner et al. 2001).

The difference between the PhD and the professional doctorate is that the latter is about a contribution to a field of activity rather than a traditional academic discipline. As Bourner and others state, ‘If PhDs are about developing professional researchers then, Professional Doctorates are about developing research professionals’ (Bourner et al. 2001). They further state that ‘If the PhD is intended to lead to advancement in knowledge in the academic disciplines, then the Professional Doctorate is intended to lead to advancement in professional practice’ (Bourner et al. 2001). Despite this apparent clear delineation between the PhD and the professional doctorate Evans (2002) points out the definition of what are ‘professional doctorates’ is often ambiguous and taken for granted in the academia but he does acknowledge that the focus of most such degrees is the ‘interests, contexts and circumstances of professional people’ (Evans 2002). Lee and others state that what distinguishes professional doctorates from PhDs in Australia is ‘the offering of coursework and other formal activity’ (Lee et al. 2000). There is however a high level of variability of the amount of coursework found in professional doctorates. According to Lee and others, they found some professional doctorates were one hundred percent research whilst other were one hundred percent coursework but they argue this may simply be a sign of the volatility and flexibility of these qualifications.

Turning to the students of professional doctorates, Lee and others cite work by Grichting that three quarters of students enrolling on such programs are part-time and the majority of the students are in full-time work (Grichting, 1998, cited in Lee and others 2000). This is significant as one quarter of professional doctorate students are full-time, which indicates that the professional doctorates are not the exclusive domain of part-time students and the common element is not the status of the students’ enrolment but their relationship to the workplace.

Finally, turning to the pedagogy of the professional doctorates, there is evidence that professions have always had the concept of work based learning in terms of
enhancing their professional practice as a critical part of their lives (Bourner et al. 2001). At the centre of work-based learning are a number of pedagogies including ‘situated learning’ and ‘communities of practice’. When these are combined with concepts of the ‘reflective practitioner’, ‘experiential learning’ and ‘critical thinking’ of academia they lead to the practice of ‘critical reflection’ which provides the underpinning of pedagogy of professional doctorates (Bourner et al. 2001).

**Part 2 – Commencing a PhD: One candidate’s account**

**Introduction**

Undertaking a PhD on the doctoral experience provides an opportunity to consider not only fulfilling the role of participant researcher, but also communicating aspects of one’s own lived practices to a variety of audiences. Fortunately, some researchers have already paved the way by using an active voice to communicate aspects of their own research (Ellis 1997; Gergen 2000; McCormack 2003). While it is beyond the scope of the second part of this paper to explore the concepts of autoethnography and the use of the narrative voice in any depth, the following extract is instructive. It forms part of the introduction to a collection of chapters in a book entitled *Representation and the Text: Re-framing the narrative text* and advocates the need for greater experimentation with regard to writing styles in academic settings and contexts:

> Who we are changes what we write about and how we write. Simply stated, if the academy is to change, if our views of reality are to be more inclusive, then we need a broader representation of authorial voices as we approach the twenty-first century. Thus, we offer here an argument or experimental representational practices that may well not enable us to discover new lands – as if they were out there, waiting to be found – but instead, help us to create new ways to see the world, and in doing so, broaden who we mean by “us”. (p.xvi)
> (Tierney and Lincoln 1997)

What follows is an account of my personal experience that is designed to provide an insight to the ‘reality’ of commencing a PhD at mid to late career stage. It is designed to complement the first part of this paper by providing a view of the doctoral experience through a participant lens. Needless to say, there are risks associated with this approach, not the least of which are perceptions of self-indulgence or self-absorption – not to mention a lack of rigour. To help avoid such criticism, I have structured the narrative using four categories that pick up on changes in the PhD population identified in Part 1 and in my recent review of the literature. The categories are candidate’s background, higher degree research skills, learning environments and work practices. The objective is to provide an honest and accessible account that hopefully will resonate with others working in the field – especially other PhD candidates and supervisors – but also act as a focus for improvement, for example, in the form of increased debate and collaborative action regarding the doctoral experience.
Candidate’s Background
As a professional educator for around 30 years, I have worked in and across most sectors of education, predominantly at the national level. After commencing as a secondary teacher of social science, I worked in a variety of settings including community education, TAFE, course accreditation, curriculum and professional development and also operated as a freelance consultant for some time. For about ten years in total, I fulfilled the role of Chief Executive for two national professional associations in education. Needless to say, I managed to develop an extensive network of experts and critical friends, many of whom were located in education faculties, research agencies and professional associations.

I enrolled as a full-time PhD candidate at the ANU on 31 March 2004, believing that a wealth of knowledge, skills and attributes developed during my time in the workforce would serve me and the project well. Project management, writing, networking, problem solving, strategic planning and human relations were near the top of my list of skills and capabilities. For example, I had been reasonably successful at writing submissions and tendering for externally funded research projects, resulting in managerial responsibility for the implementation of several large-scale, national studies. In addition, I had also authored various project reports, a couple of books on innovative approaches to teaching and numerous articles and columns for professional journals. A couple of awards acknowledged a commitment to excellence in education generally, and the advancement of the profession in particular. In summary, the world of the PhD appeared to be my oyster.

Research Skills
However, on entering the main ANU library for the first time, a shiver went down my spine as I suddenly realised that twenty years had elapsed since I had completed a Masters Degree by research at Monash University. I recollected that ‘state of the art’ technology at that time had included microfiche readers and golf-ball typewriters. To counter mounting trepidation, I reminded myself that I had mastered a variety of new technologies during the course of my professional life (e.g. the internet, online discussion groups, PowerPoint presentations and video conferencing). Unfortunately, all this tended to evaporate as I rapidly came to realise that my expertise in key areas of advanced research such as database development, on-line searching and bibliographic management was minimal. To make matters worse, theories and practices associated with formal academic research seemed to be buried so far back in the recesses of my mind, as to be almost inconsequential.

Fortunately, help was at hand, and I rushed to enrol in a host of courses for postgraduate students offered by the graduate school and related providers. A whole new world of graduate information literacy was unveiled, and I gradually managed to build my expertise in on-line searching and various software packages like EndNote. The term ‘novice’ resonated with me as I appreciated the urgent need to upskill with a view to catching up with continuing students – not to mention supervisors and advisors – whose skill base in technology was far superior to mine, and often taken for granted. I also recognised a number of other shortcomings, especially with regard to the protocols associated with academic writing styles and the rigour of formal literature reviews.
In terms of understanding doctoral education, I came to the project with a basic or
general knowledge of higher education only. For example, I was aware of the reforms
initiated by the Australian Government and was familiar with the thrust of the Higher
Education at the Crossroads and related reports. However, the field of doctoral
education was quite new to me, and represented a very steep learning curve as I strove
to come to grips with this complex phenomenon that was described variously as being
in ‘transition’ (Neumann 2003), and in ‘crisis’ (Kendall 2002). I was struck initially
by the fact that so much of the contemporary literature was concerned with
identifying and addressing ‘problems’ in the area (e.g. supervision, completion,
resourcing). Within six months, the number of entries and summaries recorded in my
EndNote referencing system exceeded 150, and a greater sense of familiarity with the
area emerged as I began to identify some key themes, issues and priorities.

It is also possible to identify a number of expectations, demands and pressures that
were operating during this beginning period. Presumably in response to criticism
levelled at doctoral programs and graduates (e.g. narrow focus; low or slow
completion rates; limited employability skills), a range of new procedures were in the
process of being implemented at ANU in 2004 such as the ‘Annual Plan’ and the
‘Thesis Proposal Review’, which required all PhD candidates to complete a series of
structured exercises and negotiate a series of milestones. Since the day of
commencement I have experienced a very strong sense in which the ‘clock is ticking’.
The expectation that every candidate’s thesis should be completed within three or four
years maximum is clear and unequivocal – and reinforced by funding regulations. The
constant pressure to deliver, whether that be in terms of producing draft material, a
progress report or a presentation based on your preliminary research has been
unrelenting. In short, tensions between education and training; process and outcome;
and knowledge and performativity – are pervasive.

Learning Environments
The Centre for Educational Development and Academic Methods (CEDAM) located
on the ANU campus constitutes my everyday working environment. I share an office
with visiting interstate and international scholars and a part-time PhD candidate, and
have access to a comprehensive range of facilities and resources. For example, my
two supervisors – Margot Pearson and Linda Hort – are co-located here, along with
another twelve staff members who are engaged in research, teaching and professional
development. Being able to rub shoulders and ‘learn the ropes’ of academic research
(Bocher 1989) by bouncing an idea, seeking advice or simply hearing about a new
publication, resource or website from a readily accessible and approachable
researcher who works just down the corridor, or with whom you can interact regularly
over morning tea is extremely valuable. In effect, this is a process of socialisation that
is supporting me in my quest not only to become a researcher, but also to belong to a
community of scholars.

I am also working within a number of other settings, learning environments or
communities of practice (Wenger 2000) that are highly relevant and important to my
research. My Supervisory Panel includes three advisors – two from ANU and one
from Deakin – in addition to my two supervisors. The panel has met on two occasions
(June and November) and I have been in liaison with individual members on regular
basis (e.g. sending them draft material for comment). There is also a project
committee that has been established comprising the CIs and representatives of the
project partners. One meeting was held in April, although Kevin and I have had additional meetings with CAPA representatives and will be attending a Council Meeting this week to discuss our progress to date and research plans. It goes without saying that Kevin and I exchange information and ideas on a regular basis, by both phone and email.

While a spirit of collaboration and cooperation tends to pervade the project, there are also points of difference and areas of tension. One example has been determining the degrees of freedom that should apply with regard to the individual thesis and the project as a whole. Another is the extent to which key terms such as ‘lived experience’ and ‘workforce participation’ are highly contested. A case in point is whether research conducted by PhD candidates constitutes an authentic, legitimate form of ‘work’. CIs and candidates alike have had differing interpretations, along with varying reactions to my interest in exploring conceptions of the doctoral candidate as a particular form of ‘knowledge worker’, and ‘PhD weblogs’ as a possible research tool. On more than one occasion, it has been necessary for me to either question my assumptions and beliefs and/or refine my approach and methodology in the light of discussions, meetings and seminars.

Contact with other researchers has been facilitated through participation in conferences and seminars on doctoral education (see Work Practices below). As a result I have established my own expanding ‘network’ of academic researchers in other states and overseas with whom I interact – primarily via email. The means of communication are relatively informal, and usually focus on sharing ideas and exchanging views on contemporary issues. Another PhD candidate at CEDAM and I have established the Higher Education Reading Opportunities (HERO) group, that meets on a monthly basis to critically review and discuss a topical article. Although attendance tends to fluctuate, there are currently about 20 registered members which includes two academics from the University of Canberra and one from the Australian Catholic University. I have also become actively involved with PARSA (see Work Practices below), and subject to Ethics Committee clearance, I am keen to access a small working group within that association in order to gain supplementary data as part of my research on the lived experience of doctoral candidates.

**Work Practices**

Old habits die hard, so I have tended to transfer established routines and work practices to my PhD. In general, this means a regular eight or nine hour day in my office at the university, with supplementary activity on some evenings and weekends (e.g. reading, writing, emailing etc). Much of my daily work has involved reviewing the literature and writing about key issues related to that material. While some ‘core texts’, ‘significant studies’ and ‘leading articles’ have been suggested by my supervisors, much of my material has been gathered by means of ANU library databases (e.g. ProQuest) and online journals (e.g. *Studies in Higher Education*). In terms of writing, a discussion paper was prepared in June; a thesis proposal that included a literature review was completed at the end of October; and this AARE paper was co-authored in November. I would like at this point to acknowledge the value of discussing aspects of Part 2 with Coralie McCormack (University of Canberra), Chris Trevitt and Margot Pearson (CEDAM) and Pete Macauley (Deakin).
In July, I conducted a preliminary mapping exercise that involved writing to the heads of academic organisational units at the ANU (28), and holding informal conversations with 25 PhD candidates working in diverse settings and contexts. The purpose was to familiarise myself with the operation of doctoral education on campus and to help ground the literature in everyday practice. An unexpected outcome was an introduction to the world of ‘blogging’ – the construction of weblogs (blogs) in general and PhD blogs in particular. I am currently exploring the possibilities of constructing my own blog as a means of recording my own PhD experience, and using this creative technology as a data source for other candidates.

I made a conscious decision a few weeks after commencement to keep a journal. I wanted this to be more than just a record of events, so with the assistance of Geoff Mortimore a colleague in CEDAM, a template was created that is used to record on a fortnightly basis the cognitive, affective and behavioural changes that I have experienced. As indicated previously, participation in a range of professional learning activities has been a regular practice. In addition to enrolling in several hands-on training courses (e.g. How to use EndNote), I have participated (with Kevin) in two significant conferences in April 2004 – Quality in Postgraduate Research (QPR) and Research on Doctoral Education (RoDE). Both provided excellent opportunities for making contacts with leading researchers and other postgraduate students working in the field.

I have also been co-opted as a member of the PARSA Executive Committee. This constitutes a form of unpaid work, whereby I contribute to a group of around 20 members whose role is to develop policy and coordinate a program of activities for postgraduate students. One of my tasks is to contribute to the ‘Research and Education Team’, established in 2004 to focus on national and University level decisions which have implications for postgraduate students from a research perspective. While I have not undertaken any other form of paid employment, I remain involved in an honorary capacity as Executive Officer of a Research Foundation connected to a professional association in education.

Coda
One of the interesting aspects associated with recording one’s lived practices as a commencing doctoral candidate is to recognise, acknowledge and accept the ‘messiness’ of the phenomenon. A number of writers (Schon 1987; Fine and Deegan 1996; Mellor 2001), have used this term to describe the ‘untidy realities’ of research and/or professional practice. Essentially, I have endeavoured in this paper to describe my experience with a view to including some of the ambiguities and uncertainties as well as the enabling and constructive factors. The emphasis has been on providing a frank and honest account – as distinct from one that is sanitised or ‘hygienic’. I strongly support the contention of a successful PhD candidate who when reflecting on his own research on research methodology stated: “some people, some of the time, may in part adopt a ‘messy method’ such as I have described” (Mellor 2001) (p.476). It will be interesting to see if this messiness continues during my candidature, and if so, to determine the extent to which I can continue to use it in a constructive way. As Mellor has argued, rather than ‘sloppy’, we need to conceptualise messy approaches as difficult and requiring a high level of skill.
Concluding Statements

The stereotypical image of the PhD candidate as a young, continuing, full-time student preparing for a career in the academy or a profession has faded over the past decade or so. While the image has not disappeared, it does need to be seen as part of an increasingly diverse collection of images, rather than the basis upon which policies, programs and funding arrangements for doctoral education are constructed. The purpose of the final section of this paper is to explore briefly a few implications of this paper for the project team, PhD candidates generally, and those with responsibility for doctoral education.

Project Team

Some of the most pressing implications for the candidates, CIs, industry partners and supervisory panels are concerned with research design and methodology. While there is consensus on the desirability of employing both quantitative and qualitative approaches, there has been considerable debate about the most effective and efficient ways of collecting and analysing data. It has been agreed that each candidate will construct his own research design, but that this should be done in a way that complements – or at least doesn’t disadvantage – the other. For example, if a national survey were proposed by one or both candidates, then the purpose, objectives and methodology would need to be negotiated. In addition, applications for ethics approval for each candidate will need to be considered by relevant committees at both universities.

It is important to note at this point, that during the writing of this paper for the AARE conference, both candidates have been preparing simultaneously their own research proposals, and presenting these to their supervisory panels, by means of a formal seminar or colloquium on their own campus. As part of the collaborative framework established in this project, both candidates have participated in each other’s presentations via teleconference. They will also be making a joint presentation to a meeting of the Council of CAPA this week to discuss progress and current directions. Hence, at this stage, it is not possible to reveal the methodologies that will be adopted.

Another implication for the team that has emerged as a result of preparing the AARE paper is the issue of co-authorship and joint publication in future. It has been agreed that all project members will comply with established protocols associated with academic publishing and intellectual property. However, the issue of how papers are actually constructed – the specific work practices that will be employed – will need to be worked through. For example, should there be a lead author and if so, what are her/his responsibilities? Should s/he take responsibility for framing and initial drafting with a view to seeking specific input and feedback from co-authors? Should co-authors agree to write particular sections, then work towards assembling these in a coherent and consistent way? Whose voices are to be articulated, for what purposes and by what means?

PhD Candidates

The increased diversity and complexity of the doctoral candidate population suggests that the traditional boundaries between study, research, work and career development are becoming increasingly blurred. Rather than viewing participation in graduate, postgraduate and workforce participation as a linear and sequential process, a much
greater range of possibilities and variation needs to be considered. For example, some doctoral candidates have work histories that include a conventional ‘career’ or a broad range of experiences in multiple settings. Some will be employed on a part- or full-time basis at some stage during their candidature. Some will be pursuing clearly defined career paths designed to lead them into (or back to) specific types of employment on completion of their doctorates. Others may have constructed broadly-based career trajectories, or simply have little idea of what they plan to do once they have achieved their PhD.

The voice of the doctoral candidate is another issue that warrants further consideration. To what extent does the narrative in this paper resonate with other PhD candidates? Would there be value in generating a wider range of stories to reflect the diversity of the population? Could such accounts be used to inform those who are thinking about undertaking a doctorate, as well as those who are already enrolled? Should the voice of doctoral candidates be heard more clearly and forcefully in their own research? If so, how? Perhaps there would be value in raising and exploring such questions in forums of postgraduate associations like CAPA, PARSA and DUSA – as well as research forums like AARE, QPR and RoDE.

Leaders and Managers
The ‘massification’ of doctoral education is raising many challenges for supervisors, university leaders and policy makers – as well as stakeholders in the private and public sectors. Flexible entry for candidates, a plethora of program options and variation with regard to requirements for completion, all raise questions about the purpose of a PhD in the 21st Century and point to the need for a reconceptualisation of the doctoral experience.

While the conventional dyadic relationship established between the principal supervisor and the candidate is still important, the links established by the candidate with other experts, researchers and professionals working in and across their fields of endeavour are assuming equal or greater significance. Leaders and managers of doctoral education may need to give greater consideration and attention not only to the backgrounds, experiences and career trajectories of PhD candidates, but also to the quality of the learning environments in which they are operating. In knowledge-based economies and societies, the connections between study, research, training and work – especially at the doctoral level – are becoming increasingly interrelated and interdependent. Indeed, for many PhD candidates, the concept of ‘work’ embraces a broad range of activities including their own research, study, training, paid and unpaid employment – not to mention entrepreneurial initiatives and family/community responsibilities.

The authors would also welcome feedback on this paper and/or requests for further information about the project – jim.cumming@anu.edu.au and/or kryl@deakin.edu.au
References


